Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 | 360.577.7222 | 360.636.1068 (fax) www.caslab.com

January 7, 2011 Analytical Report for Service Request No: K1008857

Jennifer Parker
Windward Environmental, LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119

**RE: Passaic RI/FS Sediment/Task 18.8.1**

Dear Jennifer:

Enclosed are the additional pages for the sample submitted to our laboratory on August 18, 2010. For your reference, these analyses have been assigned our service request number K1008857.

Total Phosphorus results and QC for sample LPRC07C-RB were inadvertently omitted in the original report. The pertinent pages are enclosed.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

Lynda Huckestein
Client Services Manager

LH/afs



616193

REVISED
5:41 pm, Jan 07, 2011

100% Recycled Paper

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value that was detected outside the quantitation range. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.<br>*DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| J | The result is an estimated value that was detected outside the quantitation range. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.<br>*DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value that was detected outside the quantitation range. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.<br>*DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

**Columbia Analytical Services, Inc.**
**Kelso, WA**
**State Certifications, Accreditations, and Licenses**

| Program | Number |
|---|---|
| Alaska DEC UST | UST-040 |
| Arizona DHS | AZ0339 |
| Arkansas - DEQ | 88-0637 |
| California DHS | 2286 |
| Colorado DPHE | - |
| Florida DOH | E87412 |
| Hawaii DOH | - |
| Idaho DHW | - |
| Indiana DOH | C-WA-01 |
| Louisiana DEQ | 3016 |
| Louisiana DHH | LA050010 |
| Maine DHS | WA0035 |
| Michigan DEQ | 9949 |
| Minnesota DOH | 053-999-368 |
| Montana DPHHS | CERT0047 |
| Nevada DEP | WA35 |
| New Jersey DEP | WA005 |
| New Mexico ED | - |
| North Carolina DWQ | 605 |
| Oklahoma DEQ | 9801 |
| Oregon - DHS | WA200001 |
| South Carolina DHEC | 61002 |
| Utah DOH | COLU |
| Washington DOE | C1203 |
| Wisconsin DNR | 998386840 |
| Wyoming (EPA Region 8) | - |

# Case Narrative

**COLUMBIA ANALYTICAL SERVICES, INC.**

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request No.:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Sample Matrix:** | Sediment/Water | | |

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One water and two sediment samples were received for analysis at Columbia Analytical Services on 08/18/10. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C and in a freezer at –20°C (as applicable) upon receipt at the laboratory.

### General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

### SEM Metals

No anomalies associated with the analysis of these samples were observed.

### Total Metals – Sediment

The control criteria for matrix spike recovery of Aluminum, Iron, and Magnesium for sample LPRC07C were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike recovery of Calcium and Potassium for sample LPRC07C was outside the CAS control criteria as a result of the heterogeneous character of the sample. Since the unspiked samples contained high analyte concentrations relative to the amount spiked, the variability between replicates was sufficient to bias the percent recoveries outside normal CAS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control. No further corrective action was appropriate.

### Total Metals – Water

**Matrix Spike Recovery Exceptions:**
The control criteria for matrix spike recovery of Iron for the Batch QC were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The control criteria for matrix spike recovery of Barium for the Batch QC were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

**Approved by** _____ **Date** 10/4/10

**Organotin Compounds**

**Sample Confirmation Notes:**
The confirmation comparison criteria of 40% difference for n-Butyltin was exceeded in sample LPRC13A. The lower of the two values was reported when no evidence of a matrix interference was observed.

No other anomalies associated with the analysis of these samples were observed.

**Approved by**_____ **Date** 10/4/10

# Chain of Custody

# CHAIN-OF-CUSTODY/TEST REQUEST FORM

K1008857

| | | | | | |
|---|---|---|---|---|---|
| Project/Client Name: | Passaic RI/FS Sediment | Ship to: | Columbia Analytical | | # LPR-CA081710-V1 |
| Project Number: | Task 18.8.1 | Attn: | Lynda Huckestein | Shipping Date: | 08.17.10 |
| Contact Name: | Jennifer Parker | Shipper: | FedEx | Airbill Number: | 8720 1875 3451 |
| Sampled By: | Thai Do, Angelita Rodriquez | Form filled out by: | T Do | Turnaround requested: | Standard |

| Sample Collection Date (m/d/y) | Time | Sample Identification | Volume of Sample / # of Containers | Matrix | Test(s) Requested (check test(s) required): Ammonia-N (350.1 Mod) | AVS/SEM (821R91100, 6010C/6020) | Sulfide (9030M) | | | | | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08.16.10 | 0918 | LPRC07C | 2 | Sed | x | x | x | | | | | | | | Unhomogenized sediment |
| 08.16.10 | 1039 | LPRC13A | 2 | Sed | x | x | x | | | | | | | | Unhomogenized sediment |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| **Total Number of Containers** | | | 4 | Purchase Order / Statement of Work # | | | | | | | | | | | |

| 1) Released by: | 2) Released by: | 3) Released by: | 4) Released by: | 5) Released by: |
|---|---|---|---|---|
| Company: Windward Environmental | Company: | Company: | Company: | Company: |
| Date/Time:08.17.10/0800 | Date/Time: | Date/Time: | Date/Time: | Date/Time: |
| Rec'd by: | Rec'd by: | Rec'd by: | Rec'd by: | Rec'd by: |
| Company: CAS | Company: | Company: | Company: | Company: |
| Date/Time: | Date/Time: | Date/Time: | Date/Time: | Date/Time: |

**To be completed by Laboratory upon sample receipt:**

| | |
|---|---|
| Date of receipt:: 8/18/10 | Laboratory W.O. #: |
| Condition upon receipt: good | Time of receipt: 910 |
| Cooler temperature: 0.0 / 1.2 | Received by: |

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

# CHAIN-OF-CUSTODY/TEST REQUEST FORM

K1008857

| | | | | | |
|---|---|---|---|---|---|
| Project/Client Name: | **Passaic RI/FS Sediment** | Ship to: | **Columbia Analytical** | | # LPR-CA081710-3 |
| Project Number: | Task 18.8.1 | Attn: | Lynda Huckestein | Shipping Date: | 08.17.10 |
| Contact Name: | Jennifer Parker | Shipper: | FedEx | Airbill Number: | 8720 1875 3451 |
| Sampled By: | Thai Do, Angelita Rodriquez | Form filled out by: | T Do | Turnaround requested: | Standard |

| Sample Collection Date (m/d/y) | Time | Sample Identification | Volume of Sample / # of Containers | Matrix | Test(s) Requested (check test(s) required): Butyltins (Krone) | Cyanide (9012A) | TKN (ASTM D3590-89-02) | Phosphorus (365.3 Mod) | Metals (ICP,6010B) | Metals (ICP/MS, 6020) | Metals (Se, 7742) | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08.16.10 | 0918 | LPRC07C | 2 | Sed | x | x | x | x | x | x | x | | | | |
| 08.16.10 | 1039 | LPRC13A | 2 | Sed | x | x | x | x | x | x | x | | | | |
| 08.16.10 | 0800 | LPRC07C-RB | 4 | Water | x | x | x | x | x | x | x | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| **Total Number of Containers** | | | 8 | Purchase Order / Statement of Work # | | | | | | | | | | | |

| 1) **Released by:** | 2) **Released by:** | 3) **Released by:** | 4) **Released by:** | 5) **Released by:** |
|---|---|---|---|---|
| Company: **Windward Environmental** | Company: | Company: | Company: | Company: |
| Date/Time: 08.17.10/800 | Date/Time: | Date/Time: | Date/Time: | Date/Time: |
| **Rec'd by:** | **Rec'd by:** | **Rec'd by:** | **Rec'd by:** | **Rec'd by:** |
| Company: **CAS** | Company: | Company: | Company: | Company: |
| Date/Time: | Date/Time: | Date/Time: | Date/Time: | Date/Time: |

10

Wind Ward environmental LLC

200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

**To be completed by Laboratory upon sample receipt:**

| | |
|---|---|
| Date of receipt:: 8-18-10 | Laboratory W.O. #: |
| Condition upon receipt: good | Time of receipt: 910 |
| Cooler temperature: 0.0 / 1.2 | Received by: |

# Columbia Analytical Services, Inc.
## Cooler Receipt and Preservation Form

PC LH

Client / Project: Windward Service Request K10 08857

Received: 8/18/10 Opened: 8/18/10 By: Brad

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 each side

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Cooler Temp °C | Temp Blank °C | Thermometer ID | Cooler/COC ID NA | Tracking Number NA | Filed |
|---|---|---|---|---|---|
| 0.0 | 1.0 | 248 | CUS 1 | 8677 8337 4902 | |
| 1.2 | 1.9 | 203 | CUS 2 | | X |
| | | | | | |
| | | | | | |
| | | | | | |

7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
15. Was C12/Res negative? NA Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Notes, Discrepancies, & Resolutions:* _____

*Page* 1 *of* _____

# Total Solids

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sedime/Task 18.8.1
**Sample Matrix:** Sediment

**Service Request:** K1008857

## Total Solids

**Prep Method:** NONE
**Analysis Method:** 160.3M
**Test Notes:**

**Units:** PERCENT
**Basis:** Wet

| Sample Name | Lab Code | Date Collected | Date Received | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 08/16/2010 | 08/18/2010 | 08/21/2010 | 66.1 | |
| LPRC13A | K1008857-002 | 08/16/2010 | 08/18/2010 | 08/21/2010 | 72.9 | |

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sedime/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Analyzed:** | 08/21/2010 |

**Duplicate Sample Summary**

**Total Solids**

| | | | |
|---|---|---|---|
| **Prep Method:** | NONE | **Units:** | PERCENT |
| **Analysis Method:** | 160.3M | **Basis:** | Wet |
| **Test Notes:** | | | |

| Sample Name | Lab Code | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 66.1 | 65.2 | 65.7 | 1 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

## EPA Method 160.3 - Total Solids

213594

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1008721 | | | | |
| **Analyst:** | SArwood | | | **Reviewed By:** | |
| **Date Acquired:** | 08/21/2010 12:56 | **Oven TempStart:** | 105 DEG C | **Date Reviewed:** | 8/24/10 |
| **Date Completed:** | 08/24/2010 08:14 | **Oven TempEnd:** | 105 DEG C | | |

| # | Lab Code | Client ID | Matrix | Tare | Tare+Wet | Tare+Dry | % Solids | QC Ref Sample | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | K1008824-002 | NAS02 | SOIL | 1.31g | 15.38g | 13.26g | 84.9 | | |
| 2 | K1008824-003 | NAS02FD | SOIL | 1.32g | 13.31g | 11.93g | 88.5 | | |
| 3 | K1008824-004 | NAS03 | SOIL | 1.33g | 11.37g | 10.32g | 89.5 | | |
| 4 | K1008824-005 | NAS05 | SOIL | 1.31g | 16.83g | 15.30g | 90.1 | | |
| 5 | K1008824-006 | NAS04 | SOIL | 1.32g | 14.59g | 13.77g | 93.8 | | |
| 6 | K1008824-007 | NAS06 | SOIL | 1.32g | 11.13g | 9.54g | 83.8 | | |
| 7 | K1008824-009 | NAS07 | SOIL | 1.31g | 13.27g | 10.58g | 77.5 | | |
| 8 | K1008824-010 | NAS08 | SOIL | 1.32g | 10.54g | 8.62g | 79.2 | | |
| 9 | K1008824-011 | NAS09 | SOIL | 1.31g | 15.60g | 12.70g | 79.7 | | |
| 10 | K1008846-001 | 165023 | SOIL | 1.32g | 14.45g | 10.83g | 72.4 | | |
| 11 | K1008846-002 | 175574 | SLUDGE, SOLID | 1.32g | 16.65g | 12.83g | 75.1 | | |
| 12 | K1008857-001 | LPRC07C | SEDIMENT | 1.32g | 12.55g | 8.74g | 66.1 | | |
| 13 | K1008857-002 | LPRC13A | SEDIMENT | 1.31g | 16.53g | 12.40g | 72.9 | | |
| 14 | K1008862-001 | LPRC02A | SEDIMENT | 1.31g | 11.98g | 5.37g | 38.1 | | |
| 15 | K1008862-002 | LPRC03A | SEDIMENT | 1.32g | 14.42g | 6.30g | 38.0 | | |
| 16 | K1008862-003 | LPRC03B | SEDIMENT | 1.31g | 9.44g | 4.29g | 36.7 | | |
| 17 | K1008862-004 | LPRC02B | SEDIMENT | 1.32g | 11.07g | 4.87g | 36.4 | | |
| 18 | K1008862-005 | LPRC04A | SEDIMENT | 1.32g | 10.69g | 4.83g | 37.5 | | |
| 19 | K1008862-006 | LPRC04B | SEDIMENT | 1.32g | 14.59g | 6.40g | 38.3 | | |
| 20 | K1008862-007 | LPRC04C | SEDIMENT | 1.32g | 11.34g | 5.36g | 40.3 | | |
| 21 | K1008862-008 | LPRC04D | SEDIMENT | 1.32g | 12.77g | 4.43g | 27.2 | | |
| 22 | K1008862-009 | LPRC05B | SEDIMENT | 1.32g | 11.72g | 4.70g | 32.5 | | |
| 23 | K1008862-010 | LPRC05A | SEDIMENT | 1.31g | 13.51g | 5.68g | 35.8 | | |
| 24 | K1008862-011 | LPRC05A-FD | SEDIMENT | 1.33g | 11.31g | 5.01g | 36.9 | | |
| 25 | K1008862-012 | LPRC07A | SEDIMENT | 1.33g | 10.79g | 4.33g | 31.7 | | |
| 26 | K1008862-013 | LPRC07B | SEDIMENT | 1.33g | 9.26g | 3.63g | 29.0 | | |

15

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1008721 | | | | |
| **Analyst:** | SArwood | | | **Reviewed By:** | OR |
| **Date Acquired:** | 08/21/2010 12:56 | **Oven TempStart:** | 105 DEG C | **Date Reviewed:** | 8/24/10 |
| **Date Completed:** | 08/24/2010 08:14 | **Oven TempEnd:** | 105 DEG C | | |

| # | Lab Code | Client ID | Matrix | Tare | Tare+Wet | Tare+Dry | % Solids | QC Ref Sample | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 27 | K1008862-014 | LPRC07D | SEDIMENT | 1.32g | 9.55g | 3.50g | 26.5 | | |
| 28 | K1008862-015 | LPRC06A | SEDIMENT | 1.33g | 9.68g | 4.02g | 32.2 | | |
| 29 | K1008862-016 | LPRC15A | SEDIMENT | 1.32g | 11.08g | 7.84g | 66.8 | | |
| 30 | K1008862-017 | LPRC08A | SEDIMENT | 1.33g | 8.90g | 3.62g | 30.3 | | |
| 31 | K1008862-018 | LPRC09A | SEDIMENT | 1.32g | 11.69g | 4.87g | 34.2 | | |
| 32 | K1008862-019 | LPRC10A | SEDIMENT | 1.32g | 10.10g | 4.35g | 34.5 | | |
| 33 | K1008862-020 | LPRC12A | SEDIMENT | 1.33g | 9.86g | 5.52g | 49.1 | | |
| 34 | K1008864-001 | Office Septic-Westside | SOIL | 1.31g | 12.46g | 10.78g | 84.9 | | |
| 35 | K1008864-002 | Office Septic-Eastside | SOIL | 1.33g | 23.44g | 21.18g | 89.8 | | |
| 36 | K1008867-001 | S-1 Sediment Metals I | SEDIMENT | 1.33g | 14.59g | 13.80g | 94.0 | | |
| 37 | K1008867-002 | S-1 Sediment Metals II | SEDIMENT | 1.33g | 18.61g | 17.04g | 90.9 | | |
| 38 | K1008867-003 | S-1 Sediment Metals III | SEDIMENT | 1.33g | 18.19g | 16.87g | 92.2 | | |
| 39 | K1008867-011 | S-2 Sediment Metals I | SEDIMENT | 1.32g | 14.49g | 11.25g | 75.4 | | |
| 40 | K1008867-012 | S-2 Sediment Metals II | SEDIMENT | 1.32g | 12.80g | 9.37g | 70.1 | | |
| 41 | K1008867-013 | S-2 Sediment Metals III | SEDIMENT | 1.32g | 12.55g | 9.34g | 71.4 | | |
| 42 | K1008867-023 | S-3 Sediment Metals I | SEDIMENT | 1.32g | 12.20g | 5.43g | 37.8 | | |
| 43 | K1008867-024 | S-3 Sediment Metals II | SEDIMENT | 1.33g | 10.95g | 4.98g | 37.9 | | |
| 44 | K1008867-025 | S-3 Sediment Metals III | SEDIMENT | 1.32g | 11.85g | 4.90g | 34.0 | | |
| 45 | K1008867-039 | S-4 Sediment Metals I | SEDIMENT | 1.32g | 13.94g | 11.54g | 81.0 | | |
| 46 | K1008867-040 | S-4 Sediment Metals II | SEDIMENT | 1.33g | 13.07g | 10.27g | 76.1 | | |
| 47 | K1008867-041 | S-4 Sediment Metals III | SEDIMENT | 1.32g | 11.15g | 8.86g | 76.7 | | |
| 48 | K1008867-049 | S-5N Sediment Metals I | SEDIMENT | 1.32g | 13.73g | 11.27g | 80.2 | | |
| 49 | K1008867-050 | S-5N Sediment Metals II | SEDIMENT | 1.33g | 10.20g | 7.57g | 70.3 | | |
| 50 | K1008867-051 | S-5N Sediment Metals III | SEDIMENT | 1.32g | 13.21g | 9.77g | 71.1 | | |
| 51 | K1008867-055 | S-5S Sediment Metals I | SEDIMENT | 1.33g | 10.49g | 5.90g | 49.9 | | |
| 52 | K1008867-056 | S-5S Sediment Metals II | SEDIMENT | 1.33g | 7.52g | 5.07g | 60.4 | | |
| 53 | K1008867-057 | S-5S Sediment Metals III | SEDIMENT | 1.32g | 10.52g | 6.91g | 60.8 | | |
| 54 | K1008911-001 | 10Y-H1-22-SS | SOIL | 1.32g | 17.93g | 16.84g | 93.4 | | |
| 55 | K1008911-002 | 10Y-H1-23-SO | SOIL | 1.32g | 12.05g | 11.32g | 93.2 | | |
| 56 | K1008911-003 | 10Y-H1-26-SO | SOIL | 1.33g | 16.03g | 15.04g | 93.3 | | |
| 57 | K1008911-004 | 10Y-H1-14-SS | SOIL | 1.33g | 13.47g | 12.86g | 95.0 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1008721 | | | | |
| **Analyst:** | SArwood | | | **Reviewed By:** | BL |
| **Date Acquired:** | 08/21/2010 12:56 | **Oven TempStart:** | 105 DEG C | **Date Reviewed:** | 8/24/10 |
| **Date Completed:** | 08/24/2010 08:14 | **Oven TempEnd:** | 105 DEG C | | |

| # | Lab Code | Client ID | Matrix | Tare | Tare+Wet | Tare+Dry | % Solids | QC Ref Sample | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 58 | K1008911-005 | 10Y-H1-15-SS | SOIL | 1.33g | 15.10g | 14.33g | 94.4 | | |
| 59 | K1008911-006 | 10Y-H1-17-SS | SOIL | 1.34g | 15.65g | 13.51g | 85.0 | | |
| 60 | K1008911-007 | 10Y-H1-20-SO | SOIL | 1.32g | 17.88g | 17.21g | 96.0 | | |
| 61 | K1008911-008 | 10Y-H1-07-SO | SOIL | 1.33g | 12.51g | 11.86g | 94.2 | | |
| 62 | K1008911-009 | 10Y-H1-12-SO | SOIL | 1.33g | 9.85g | 9.46g | 95.4 | | |
| 63 | K1008911-010 | 10Y-H1-04-SS | SOIL | 1.33g | 11.36g | 10.65g | 92.9 | | |
| 64 | K1008911-011 | 10Y-H1-05-SS | SOIL | 1.32g | 17.98g | 16.49g | 91.1 | | |
| 65 | KWG1008721-1 | Duplicate Client Sample | SOIL | 1.32g | 17.87g | 15.74g | 87.1 | K1008824-002 | 3 |
| 66 | KWG1008721-2 | Duplicate Client Sample | SOIL | 1.31g | 18.70g | 13.79g | 71.8 | K1008846-001 | <1 |
| 67 | KWG1008721-3 | Duplicate Client Sample | SEDIMENT | 1.31g | 11.64g | 8.04g | 65.2 | K1008857-001 | 1 |
| 68 | KWG1008721-4 | Duplicate Client Sample | SEDIMENT | 1.32g | 12.77g | 5.65g | 37.8 | K1008862-001 | <1 |
| 69 | KWG1008721-5 | Duplicate Client Sample | SEDIMENT | 1.32g | 13.74g | 5.65g | 34.9 | K1008862-011 | 6 |
| 70 | KWG1008721-6 | Duplicate Client Sample | SEDIMENT | 1.33g | 11.84g | 11.09g | 92.9 | K1008867-001 | 1 |
| 71 | KWG1008721-7 | Duplicate Client Sample | SEDIMENT | 1.32g | 11.20g | 9.07g | 78.4 | K1008867-040 | 3 |
| 72 | KWG1008721-8 | Duplicate Client Sample | SOIL | 1.33g | 16.50g | 15.36g | 92.5 | K1008911-001 | <1 |
| 73 | KWG1008721-9 | Duplicate Client Sample | SOIL | 1.32g | 12.86g | 12.33g | 95.4 | K1008911-009 | <1 |

17

# General Chemistry Parameters

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Ammonia as Nitrogen

Prep Method : CAS SOP
Analysis Method : 350.1M
Test Notes :

Units : mg/Kg
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 0.75 | 0.06 | 1 | 8/19/2010 | 08/19/10 | 11.7 | |
| LPRC13A | K1008857-002 | 0.68 | 0.06 | 1 | 8/19/2010 | 08/19/10 | 0.81 | |
| Method Blank | K1008857-MB | 0.50 | 0.04 | 1 | 8/19/2010 | 08/19/10 | 0.50 | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA
**Date Prepared :** 08/19/10
**Date Analyzed :** 08/19/10

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K1008685-016DUP
Test Notes :

Units : mg/Kg
Basis : Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | CAS SOP | 350.1M | 0.73 | 16.7 | 17.1 | 16.9 | 2 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/19/10 |
| | | **Date Analyzed :** | 08/19/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | LPRC07C | Units : | mg/Kg |
| Lab Code : | K1008857-001DUP | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | CAS SOP | 350.1M | 0.74 | 11.7 | 11.7 | 11.7 | <1 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/19/10 |
| | | **Date Analyzed :** | 08/19/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | Batch QC | | Units : | mg/Kg |
| Lab Code : | K1008685-016MS | K1008685-016DMS | Basis : | Dry |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | CAS SOP | 350.1M | 36 | 730 | 729 | 17 | 731 | 736 | 98 | 99 | 42-143 | 1 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/19/10 |
| | | **Date Analyzed :** | 08/19/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | LPRC07C | | Units : | mg/Kg |
| Lab Code : | K1008857-001MS | K1008857-001DMS | Basis : | Dry |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | CAS SOP | 350.1M | 38 | 734 | 756 | 12 | 731 | 755 | 98 | 98 | 42-143 | <1 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/19/10 |
| | | **Date Analyzed :** | 08/19/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | CAS SOP | 350.1M | 14.3 | 14.0 | 98 | 86-115 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Ammonia as Nitrogen
350.1M
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/19/2010 | 2.00 | 1.97 | 99 |
| CCV2 Result | 8/19/2010 | 2.00 | 1.92 | 96 |
| CCV3 Result | 8/19/2010 | 2.00 | 1.94 | 97 |
| CCV4 Result | 8/19/2010 | 2.00 | 1.97 | 99 |
| CCV5 Result | 8/19/2010 | 2.00 | 1.97 | 99 |
| CCV6 Result | 8/19/2010 | 2.00 | 1.97 | 99 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Ammonia as Nitrogen
350.1M
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/19/2010 | 0.050 | 0.024 J |
| CCB2 Result | 8/19/2010 | 0.050 | 0.050 U |
| CCB3 Result | 8/19/2010 | 0.050 | 0.050 U |
| CCB4 Result | 8/19/2010 | 0.050 | 0.050 U |
| CCB5 Result | 8/19/2010 | 0.050 | 0.050 U |
| CCB6 Result | 8/19/2010 | 0.050 | 0.050 U |

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Phosphorus, Total

Prep Method : Method
Analysis Method : 365.3M
Test Notes :

Units : mg/Kg
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 3.8 | 0.2 | 25 | 9/7/2010 | 09/08/10 | 1240 | |
| LPRC13A | K1008857-002 | 3.4 | 0.2 | 25 | 9/7/2010 | 09/08/10 | 1350 | |
| Method Blank | K1008857-MB | 0.10 | 0.01 | 1 | 9/7/2010 | 09/08/10 | 0.08 | J |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 09/07/10 |
| | | **Date Analyzed :** | 09/08/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | LPRC07C | Units : | mg/Kg |
| Lab Code : | K1008857-001DUP | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3M | 3.8 | 1240 | 1090 | 1170 | 13 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 09/07/10 |
| | | **Date Analyzed :** | 09/08/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | LPRC07C | | Units : | mg/Kg |
| Lab Code : | K1008857-001MS | K1008857-001DMS | Basis : | Dry |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3M | 7.6 | 1410 | 2560 | 1240 | 2510 | 3510 | 90 | 89 | 10-157 | 1 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 09/07/10 |
| | | **Date Analyzed :** | 09/08/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Laboratory Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3M | 510 | 478 | 94 | 85-124 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Phosphorus, Total
365.3
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/30/2010 | 0.500 | 0.501 | 100 |
| CCV2 Result | 8/30/2010 | 0.500 | 0.503 | 101 |
| CCV3 Result | 8/30/2010 | 0.500 | 0.510 | 102 |
| CCV4 Result | 8/30/2010 | 0.500 | 0.503 | 101 |
| CCV5 Result | 8/30/2010 | 0.500 | 0.501 | 100 |
| CCV6 Result | 8/30/2010 | 0.500 | 0.500 | 100 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Phosphorus, Total
365.3M
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 9/8/2010 | 0.010 | 0.007 J |
| CCB2 Result | 9/8/2010 | 0.010 | 0.008 J |
| CCB3 Result | 9/8/2010 | 0.010 | 0.009 J |
| CCB4 Result | 9/8/2010 | 0.010 | 0.009 J |

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Sulfide, Acid-Volatile

Prep Method : EPA 821/R-91-100
Analysis Method : 821/R-91-100
Test Notes :

Units : uMole/g
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 0.024 | 0.005 | 1 | 8/26/2010 | 08/26/10 | 0.104 | |
| LPRC13A | K1008857-002 | 0.021 | 0.004 | 1 | 8/26/2010 | 08/26/10 | 0.021 | U |
| Method Blank | K1008857-MB | 0.021 | 0.004 | 1 | 8/26/2010 | 08/26/10 | 0.021 | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | LPRC07C | Units : | uMole/g |
| Lab Code : | K1008857-001DUP | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Sulfide, Acid-Volatile | EPA 821/R-91-100 | 821/R-91-100 | 0.024 | 0.104 | 0.134 | 0.119 | 25 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | LPRC07C | | Units : | uMole/g |
| Lab Code : | K1008857-001MS | K1008857-001DMS | Basis : | Dry |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfide, Acid-Volatile | EPA 821/R-91-100 | 821/R-91-100 | 2.4 | 26.1 | 21.1 | 0.104 | 22.0 | 21.5 | 84 | 101 | 53-143 | 18 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Sulfide, Acid-Volatile | EPA 821/R-91-100 | 821/R-91-100 | 7.40 | 7.11 | 96 | 71-112 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Total Sulfides
821/R-91-100
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/26/2010 | 1.85 | 1.85 | 100 |
| CCV2 Result | 8/26/2010 | 1.85 | 1.85 | 100 |
| CCV3 Result | 8/26/2010 | 1.85 | 1.85 | 100 |
| CCV4 Result | 8/26/2010 | 1.85 | 1.85 | 100 |
| CCV5 Result | 8/26/2010 | 1.85 | 1.85 | 100 |
| CCV6 Result | 8/26/2010 | 1.85 | 1.84 | 99 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Total Sulfides
821/R-91-100
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/26/2010 | 0.050 | 0.050 U |
| CCB2 Result | 8/26/2010 | 0.050 | 0.050 U |
| CCB3 Result | 8/26/2010 | 0.050 | 0.050 U |
| CCB4 Result | 8/26/2010 | 0.050 | 0.050 U |
| CCB5 Result | 8/26/2010 | 0.050 | 0.050 U |
| CCB6 Result | 8/26/2010 | 0.050 | 0.050 U |

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Cyanide, Total

Prep Method : Method
Analysis Method : 9012A
Test Notes :

Units : mg/Kg
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 0.26 | 0.08 | 1 | 8/26/2010 | 08/26/10 | 0.26 | U |
| LPRC13A | K1008857-002 | 0.25 | 0.08 | 1 | 8/26/2010 | 08/26/10 | 0.25 | U |
| Method Blank | K1008857-MB | 0.25 | 0.08 | 1 | 8/26/2010 | 08/26/10 | 0.25 | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | BatchQC | Units : | mg/Kg |
| Lab Code : | K1008685-016DUP | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 0.27 | 0.27 | 0.27 | 0.27 | - | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | Batch QC | | Units : | mg/Kg |
| Lab Code : | K1008685-016MS | K1008685-016DMS | Basis : | Dry |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 0.26 | 2.74 | 2.60 | 0.27 | 1.70 | 0.46 | 62 | 18 | 10-167 | 110 | * |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/26/10 |
| | | **Date Analyzed :** | 08/26/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 25.1 | 23.2 | 92 | 80-109 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** WATER

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Cyanide, Total

Prep Method : Method
Analysis Method : 9012A
Test Notes :

Units : mg/L
Basis : NA

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C-RB | K1008857-003 | 0.010 | 0.003 | 1 | 8/23/2010 | 08/23/10 | 0.012 | |
| Method Blank | K1008857-MB | 0.010 | 0.003 | 1 | 8/23/2010 | 08/23/10 | 0.010 | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/26/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | BatchQC | Units : | mg/L |
| Lab Code : | K1008437-001DUP | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 0.010 | 0.010 | 0.010 | 0.010 | - | U |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/26/10 |

Matrix Spike Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | BatchQC | Units : | mg/L |
| Lab Code : | K1008437-001MS | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level | Sample Result | Spiked Sample Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 0.010 | 0.100 | 0.010 | 0.102 | 102 | 35-144 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/23/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/L |
| Lab Code : | K1008857-LCS | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | Method | 9012A | 0.730 | 0.752 | 103 | 83-116 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Cyanide, Total
9012A
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/26/2010 | 1.00 | 1.07 | 107 |
| CCV2 Result | 8/26/2010 | 1.00 | 1.06 | 106 |
| CCV3 Result | 8/26/2010 | 1.00 | 1.06 | 106 |
| CCV4 Result | 8/26/2010 | 1.00 | 1.07 | 107 |
| CCV5 Result | 8/26/2010 | 1.00 | 1.07 | 107 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Cyanide, Total
9012A
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/26/2010 | 0.010 | 0.010 U |
| CCB2 Result | 8/26/2010 | 0.010 | 0.010 U |
| CCB3 Result | 8/26/2010 | 0.010 | 0.010 U |
| CCB4 Result | 8/26/2010 | 0.010 | 0.010 U |
| CCB5 Result | 8/26/2010 | 0.010 | 0.010 U |

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Sulfide, Total

Prep Method : EPA 9030B Modified
Analysis Method : 9030M
Test Notes :

Units : mg/Kg
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 0.76 | 0.36 | 1 | 8/23/2010 | 08/24/10 | 6.40 | |
| LPRC13A | K1008857-002 | 0.69 | 0.33 | 1 | 8/23/2010 | 08/24/10 | 10.5 | |
| Method Blank | K1008857-MB | 0.50 | 0.20 | 1 | 8/23/2010 | 08/24/10 | 0.50 | U |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | LPRC07C | Units : | mg/Kg |
| Lab Code : | K1008857-001DUP | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Sulfide, Total | EPA 9030B Modified | 9030M | 0.76 | 6.40 | 4.86 | 5.63 | 27 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : LPRC07C
Lab Code : K1008857-001MS K1008857-001DMS
Test Notes :

Units : mg/Kg
Basis : Dry

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfide, Total | EPA 9030B Modified | 9030M | 76 | 557 | 542 | 6.40 | 609 | 558 | 108 | 102 | 34-166 | 6 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Sulfide, Total | EPA 9030B Modified | 9030M | 7.40 | 7.37 | 100 | 55-130 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Sulfide, Total
9030M
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/24/2010 | 1.85 | 1.84 | 99 |
| CCV2 Result | 8/24/2010 | 1.85 | 1.83 | 99 |
| CCV3 Result | 8/24/2010 | 1.85 | 1.84 | 99 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Sulfide, Total
9030M
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/24/2010 | 0.050 | 0.050 U |
| CCB2 Result | 8/24/2010 | 0.050 | 0.050 U |
| CCB3 Result | 8/24/2010 | 0.050 | 0.050 U |

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** WATER

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Nitrogen, Total Kjeldahl (TKN)

Prep Method : ASTM D 3590-89B-21.1
Analysis Method : ASTM D1426-93B
Test Notes :

Units : mg/L
Basis : NA

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C-RB | K1008857-003 | 0.20 | 0.08 | 1 | 8/23/2010 | 08/24/10 | 0.55 | |
| Method Blank | K1008857-MB | 0.20 | 0.08 | 1 | 8/23/2010 | 08/24/10 | 0.11 | J |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | LPRC07C-RB | Units : | mg/L |
| Lab Code : | K1008857-003DUP | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-21.1 | ASTM D1426-93B | 0.20 | 0.55 | 0.57 | 0.56 | 4 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : LPRC07C-RB

Lab Code : K1008857-003MS K1008857-003DMS

Test Notes :

Units : mg/L

Basis : NA

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-2 1.1 | ASTM D1426-93B | 0.20 | 20.0 | 40.0 | 0.55 | 19.6 | 42.8 | 95 | 106 | 37-158 | 11 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/23/10 |
| | | **Date Analyzed :** | 08/24/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/L |
| Lab Code : | K1008857-LCS | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-21.1 | ASTM D1426-93B | 8.58 | 9.48 | 110 | 78-117 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Nitrogen, Total Kjeldahl (TKN)
ASTM D1426-93B
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/24/2010 | 10.0 | 9.39 | 94 |
| CCV2 Result | 8/24/2010 | 10.0 | 9.20 | 92 |
| CCV3 Result | 8/24/2010 | 10.0 | 9.20 | 92 |
| CCV4 Result | 8/24/2010 | 10.0 | 9.65 | 97 |
| CCV5 Result | 8/24/2010 | 10.0 | 9.08 | 91 |
| CCV6 Result | 8/24/2010 | 10.0 | 10.9 | 109 |
| CCV7 Result | 8/24/2010 | 10.0 | 9.78 | 98 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Nitrogen, Total Kjeldahl (TKN)
ASTM D1426-93B
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/24/2010 | 0.050 | 0.050 U |
| CCB2 Result | 8/24/2010 | 0.050 | 0.037 J |
| CCB3 Result | 8/24/2010 | 0.050 | 0.010 J |
| CCB4 Result | 8/24/2010 | 0.050 | 0.043 J |
| CCB5 Result | 8/24/2010 | 0.050 | 0.029 J |
| CCB6 Result | 8/24/2010 | 0.050 | 0.043 J |
| CCB7 Result | 8/24/2010 | 0.050 | 0.041 J |

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** SEDIMENT

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Nitrogen, Total Kjeldahl (TKN)

Prep Method : ASTM D 3590-89B-21.1 Mod
Analysis Method : ASTM D1426-93B Modified
Test Notes :

Units : mg/Kg
Basis : Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 59 | 12 | 1 | 8/24/2010 | 08/24/10 | 1870 | |
| LPRC13A | K1008857-002 | 53 | 11 | 1 | 8/24/2010 | 08/24/10 | 1150 | |
| Method Blank | K1008857-MB | 40 | 8 | 1 | 8/24/2010 | 08/24/10 | 21 | J |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/24/10 |
| | | **Date Analyzed :** | 08/24/10 |

Duplicate Summary
Inorganic Parameters

Sample Name : LPRC13A
Lab Code : K1008857-002DUP
Test Notes :

Units : mg/Kg
Basis : Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-21.1 Mod | ASTM D1426-93B Modified | 53 | 1150 | 1120 | 1140 | 3 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | 8/16/2010 |
| **Project Number :** | Task 18.8.1 | **Date Received :** | 8/18/2010 |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/24/10 |
| | | **Date Analyzed :** | 08/24/10 |

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : LPRC13A
Lab Code : K1008857-002MS K1008857-002DMS
Test Notes :

Units : mg/Kg
Basis : Dry

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-2 1.1 Mod | ASTM D1426-93B Modified | 54 | 4570 | 8970 | 1150 | 9190 | 13500 | 176 | 138 | 23-174 | 24 | * |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | SEDIMENT | **Date Prepared :** | 08/24/10 |
| | | **Date Analyzed :** | 08/24/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/Kg |
| Lab Code : | K1008857-LCS | Basis : | Dry |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Nitrogen, Total Kjeldahl (TKN) | ASTM D 3590-89B-21. 1 Mod | ASTM D1426-93B Modified | 822 | 873 | 106 | 77-123 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Nitrogen, Total Kjeldahl (TKN)
ASTM D1426-93B Modified
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/24/2010 | 10.0 | 9.78 | 98 |
| CCV2 Result | 8/24/2010 | 10.0 | 10.9 | 109 |
| CCV3 Result | 8/24/2010 | 10.0 | 9.08 | 91 |
| CCV4 Result | 8/24/2010 | 10.0 | 9.65 | 97 |
| CCV5 Result | 8/24/2010 | 10.0 | 9.20 | 92 |
| CCV6 Result | 8/24/2010 | 10.0 | 9.20 | 92 |
| CCV7 Result | 8/24/2010 | 10.0 | 9.39 | 94 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Nitrogen, Total Kjeldahl (TKN)
ASTM D1426-93B Modified
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/24/2010 | 0.050 | 0.050 U |
| CCB2 Result | 8/24/2010 | 0.050 | 0.037 J |
| CCB3 Result | 8/24/2010 | 0.050 | 0.010 J |
| CCB4 Result | 8/24/2010 | 0.050 | 0.043 J |
| CCB5 Result | 8/24/2010 | 0.050 | 0.029 J |
| CCB6 Result | 8/24/2010 | 0.050 | 0.043 J |
| CCB7 Result | 8/24/2010 | 0.050 | 0.041 J |

Work Request # (Original) (K8747), K8899, K8964, K8795, K8857, K8929, K8945, K8851

Tier: III, III, III, II, V, I, I, I

Date Analyzed: 8/30/10

Analyst: J. Franks  MDN # 214810

Analysis: TPH-DS (365.3)

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**
12. K8747, K8899 - past date due date

Final Approved by: A  Date: 8/31/10

DQREPORT

Work Request # Original (~~K9179~~), K9062, K9081, K9151, K9212

Tier: I, II, II, II

Date Analyzed: 8/30/10

Analyst: [illegible]

Analysis: TPHOS (365.3)

RUN # 214810

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

Final Approved by: [signature] Date: 8/31/10

DQREPORT

0 IF 8/30/10

Work Request # Original (R41 79)

Tier: II

Date Analyzed: 8/26/10

Analyst: J. Franks

Analysis: TPHOS (365.3)

RUN # 214810

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

**COMMENTS:**

Final Approved by: [signature] Date: 8/31/10

DQREPORT

# Analytical Results Summary

**Instrument Name:** K-UV-VIS-01 **Analyst:** IFRANKS **Analysis Lot:** 214810 **Method/Testcode:** 365.3/Phos T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1008747-001 | Phosphorus, Total | N/A | | Water | 0.35 mg/L | 50 mL | 0.710 mg/L | 2 | 0.008 | 0.020 | | | 8/30/10 17:30:00 | N | V |
| K1008747-002 | Phosphorus, Total | N/A | | Water | 0.24 mg/L | 50 mL | 0.489 mg/L | 2 | 0.008 | 0.020 | | | 8/30/10 17:30:00 | N | V |
| K1008747-003 | Phosphorus, Total | N/A | | Water | 0.30 mg/L | 50 mL | 0.603 mg/L | 2 | 0.008 | 0.020 | | | 8/30/10 17:30:00 | Y | V |
| K1008747-004 | Phosphorus, Total | N/A | | Water | 0.25 mg/L | 50 mL | 0.491 mg/L | 2 | 0.008 | 0.020 | | | 8/30/10 17:30:00 | N | V |
| K1008795-001 | Phosphorus, Total | N/A | | Ocean Water | 0.02 mg/L | 50 mL | 0.024 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1008795-002 | Phosphorus, Total | N/A | | Ocean Water | 0.01 mg/L | 50 mL | 0.007 mg/L J | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1008857-003 | Phosphorus, Total | N/A | | Water | 0.01 mg/L | 50 mL | 0.012 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008881-001 | Phosphorus, Total | N/A | | Water | 0.57 mg/L | 50 mL | 2.87 mg/L | 5 | 0.020 | 0.050 | | | 8/30/10 17:30:00 | N | I |
| K1008899-001 | Phosphorus, Total | N/A | | Water | 0.06 mg/L | 50 mL | 0.056 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-002 | Phosphorus, Total | N/A | | Water | 0.01 mg/L | 50 mL | 0.009 mg/L J | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-003 | Phosphorus, Total | N/A | | Water | 0.00 mg/L | 50 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-004 | Phosphorus, Total | N/A | | Water | 0.01 mg/L | 50 mL | 0.005 mg/L J | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-005 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.026 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-006 | Phosphorus, Total | N/A | | Water | 0.00 mg/L | 50 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-007 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.032 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008899-008 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.030 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1008929-001 | Phosphorus, Total | N/A | | Water | 0.39 mg/L | 50 mL | 0.393 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | I |
| K1008945-001 | Phosphorus, Total | N/A | | Water | 0.08 mg/L | 50 mL | 0.075 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | I |
| K1008945-002 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.032 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | I |
| K1008945-003 | Phosphorus, Total | N/A | | Water | 0.28 mg/L | 50 mL | 14.0 mg/L | 50 | 0.20 | 0.50 | | | 8/30/10 17:30:00 | N | I |
| K1008964-001 | Phosphorus, Total | N/A | | Water | 0.01 mg/L | 50 mL | 0.006 mg/L J | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| K1009062-002 | Phosphorus, Total | N/A | | Water | 0.28 mg/L | 50 mL | 2.76 mg/L | 10 | 0.04 | 0.10 | | | 8/30/10 17:30:00 | N | I |
| K1009081-002 | Phosphorus, Total | N/A | | Water | 0.35 mg/L | 50 mL | 0.352 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-001 | Phosphorus, Total | N/A | | Water | 0.00 mg/L | 50 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-003 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.029 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-004 | Phosphorus, Total | N/A | | Water | 0.01 mg/L | 50 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-005 | Phosphorus, Total | N/A | | Water | 0.03 mg/L | 50 mL | 0.031 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-006 | Phosphorus, Total | N/A | | Water | 0.04 mg/L | 50 mL | 0.035 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-007 | Phosphorus, Total | N/A | | Water | 0.09 mg/L | 50 mL | 0.088 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009151-008 | Phosphorus, Total | N/A | | Water | 0.07 mg/L | 50 mL | 0.074 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009179-001 | Phosphorus, Total | N/A | | Water | 0.45 mg/L | 50 mL | 4.51 mg/L | 10 | 0.04 | 0.10 | | | 8/30/10 17:30:00 | N | II |
| K1009212-001 | Phosphorus, Total | N/A | | Water | 0.21 mg/L | 50 mL | 0.213 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009212-002 | Phosphorus, Total | N/A | | Water | 0.15 mg/L | 50 mL | 0.152 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009212-003 | Phosphorus, Total | N/A | | Water | 0.05 mg/L | 50 mL | 0.055 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009212-004 | Phosphorus, Total | N/A | | Water | 0.17 mg/L | 50 mL | 0.172 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| K1009212-005 | Phosphorus, Total | N/A | | Water | 0.13 mg/L | 50 mL | 0.130 mg/L | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | II |
| KQ1009047-18 | Phosphorus, Total | LCS | | Sediment | 0.35 mg/L | 100 mL | 0.353 mg/L | 1 | 0.004 | 0.010 | 109 | | 8/30/10 17:30:00 | N | V |
| KQ1009047-20 | Phosphorus, Total | MB | | Sediment | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-UV-VIS-01 **Analyst:** IFRANKS **Analysis Lot:** 214810 **Method/Testcode:** 365.3/Phos T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KQ1009047-22 | Phosphorus, Total | LCS | | Sediment | 0.36 mg/L | 100 mL | 0.361 mg/L | 1 | 0.004 | 0.010 | 112 | | 8/30/10 17:30:00 | N | V |
| KQ1009047-24 | Phosphorus, Total | MB | | Sediment | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009047-29 | Phosphorus, Total | MS | K1008747-003 | Water | 0.37 mg/L | 25 mL | 1.85 mg/L | 5 | 0.020 | 0.050 | 125 | | 8/30/10 17:30:00 | N | V |
| KQ1009047-30 | Phosphorus, Total | DMS | K1008747-003 | Water | 0.28 mg/L | 25 mL | 2.83 mg/L | 10 | 0.04 | 0.10 | 111 | 42* | 8/30/10 17:30:00 | N | V |
| KQ1009047-31 | Phosphorus, Total | DUP | K1008747-003 | Water | 0.33 mg/L | 25 mL | 0.656 mg/L | 2 | 0.008 | 0.020 | | 8 | 8/30/10 17:30:00 | N | V |
| KQ1009050-01 | Phosphorus, Total | MS | K1009081-002 | Water | 0.29 mg/L | 25 mL | 1.43 mg/L | 5 | 0.020 | 0.050 | 108 | | 8/30/10 17:30:00 | N | II |
| KQ1009050-02 | Phosphorus, Total | DMS | K1009081-002 | Water | 0.26 mg/L | 25 mL | 2.63 mg/L | 10 | 0.04 | 0.10 | 114 | 59* | 8/30/10 17:30:00 | N | II |
| KQ1009050-03 | Phosphorus, Total | DUP | K1009081-002 | Water | 0.36 mg/L | 50 mL | 0.355 mg/L | 1 | 0.004 | 0.010 | | 1 | 8/30/10 17:30:00 | N | II |
| KQ1009054-01 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-02 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-03 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-04 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-05 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.010 mg/L U | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-06 | Phosphorus, Total | CCB | | Water | 0.00 mg/L | 100 mL | 0.004 mg/L J | 1 | 0.004 | 0.010 | | | 8/30/10 17:30:00 | N | V |
| KQ1009054-07 | Phosphorus, Total | CCV | | Water | 0.50 mg/L | 100 mL | .5011 mg/L | 1 | 0.004 | 0.010 | 100% | | 8/30/10 17:30:00 | N | V |
| KQ1009054-08 | Phosphorus, Total | CCV | | Water | 0.50 mg/L | 100 mL | .5032 mg/L | 1 | 0.004 | 0.010 | 101% | | 8/30/10 17:30:00 | N | V |
| KQ1009054-09 | Phosphorus, Total | CCV | | Water | 0.51 mg/L | 100 mL | .5096 mg/L | 1 | 0.004 | 0.010 | 102% | | 8/30/10 17:30:00 | N | V |
| KQ1009054-10 | Phosphorus, Total | CCV | | Water | 0.50 mg/L | 100 mL | .5035 mg/L | 1 | 0.004 | 0.010 | 101% | | 8/30/10 17:30:00 | N | V |
| KQ1009054-11 | Phosphorus, Total | CCV | | Water | 0.50 mg/L | 100 mL | .5008 mg/L | 1 | 0.004 | 0.010 | 100% | | 8/30/10 17:30:00 | N | V |
| KQ1009054-12 | Phosphorus, Total | CCV | | Water | 0.50 mg/L | 100 mL | .4999 mg/L | 1 | 0.004 | 0.010 | 100% | | 8/30/10 17:30:00 | N | V |

71

IF 8/30/10

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

S 20 ppm

IF 8/30/10
TPHOS

DU520 S/N: 0112U2001732 1.03
30-AUG-10 17:32:43 SCA
Wavelength: 650.0 nm
Formula: A=a+bC a: -0.0007 b: 1.9194

| mg/L | Net A | r2=1.000 Var=0.0001 |
|---|---|---|
| 0.0000 | -0.000 | |
| 0.0100 | 0.018 | |
| 0.0500 | 0.096 | |
| 0.1000 | 0.188 | |
| 0.2000 | 0.379 | |
| 0.5000 | 0.976 | |
| 0.7000 | 1.333 | |

IF 8/30/10

TPHOS

K 8747, K 8899, K 8881, K 8964, K 8747, K 8795, K 8857, K 8929, K 8945, K9179, K 9062, K9081, K9151, K 9242

DU520 S/N: 0112U2001732 1.03
30-AUG-10 17:33:54 SCA Group 1383
Wavelength: 650.0 nm
Formula: A=a+bC a: -0.0007 b: 1.9194

| Sample | | Net A | Dil X | mg/L |
|---|---|---|---|---|
| 0001 | | ~~-0.000~~ | ~~1.0000~~ | ~~0.0004~~ ⊙ |
| 0002 | ICB | 0.002 | 1.0000 | 0.0016 |
| 0003 | ICV | 0.804 | 1.0000 | 0.4193 |
| 0004 | CCB1 | 0.004 | 1.0000 | 0.0022 |
| 0005 | CCV1 | 0.961 | 1.0000 | 0.5011 |
| 0006 | MB1 | 0.001 | 1.0000 | 0.0007 |
| 0007 | LCS1 | 0.676 1/10 | 1.0000 | 0.3526 |
| 0008 | | ~~1.360 1/10~~ | ~~1.0000~~ | ~~0.7087~~ ⊙ |
| 0009 | K8747-1 | 0.680 1/2 | 1.0000 | 0.3549 |
| 0010 | -2 | 0.469 1/2 | 1.0000 | 0.2445 |
| 0011 | | ~~0.327~~ | ~~1.0000~~ | ~~0.1705~~ ⊙ |
| 0012 | | ~~0.405~~ | ~~1.0000~~ | ~~0.2114~~ |
| 0013 | K8747 -3 | 0.578 1/2 | 1.0000 | 0.3013 |
| 0014 | -3d | 0.628 1/2 | 1.0000 | 0.3278 |
| 0015 | -3MS | 0.709 10/50 | 1.0000 | 0.3700 |
| 0016 | -3MSd | 0.543 5/50 | 1.0000 | 0.2830 |
| 0017 | K8899-1 | 0.107 | 1.0000 | 0.0559 |
| 0018 | | ~~0.071~~ | ~~1.0000~~ | ~~0.0373~~ ⊙ |
| 0019 | CCB2 | 0.003 | 1.0000 | 0.0022 |
| 0020 | CCV2 | 0.965 | 1.0000 | 0.5032 |
| 0021 | K8894 -2 | 0.016 | 1.0000 | 0.0086 |
| 0022 | -3 | 0.005 | 1.0000 | 0.0027 |
| 0023 | -4 | 0.009 | 1.0000 | 0.0052 |
| 0024 | -5 | 0.049 | 1.0000 | 0.0260 |
| 0025 | -6 | 0.005 | 1.0000 | 0.0032 |
| 0026 | -7 | 0.060 | 1.0000 | 0.0318 |
| 0027 | -8 | 0.057 | 1.0000 | 0.0303 |
| 0028 | | ~~0.081~~ | ~~1.0000~~ | ~~0.0423~~ ⊙ |
| 0029 | K8881-1 | 1.103 10/50 | 1.0000 | 0.5749 |
| 0030 | K8964-1 | 0.010 | 1.0000 | 0.0058 |
| 0031 | CCB3 | 0.005 | 1.0000 | 0.0028 |
| 0032 | CCV3 | 0.977 | 1.0000 | 0.5096 |
| 0033 | K8747-4 | 0.470 1/2 | 1.0000 | 0.2453 |
| 0034 | K8795 -1 | 0.046 | 1.0000 | 0.0244 |
| 0035 | -2 | 0.012 | 1.0000 | 0.0067 |
| 0036 | K8857-3 | 0.022 | 1.0000 | 0.0119 |
| 0037 | | ~~0.005~~ | ~~1.0000~~ | ~~0.0031~~ ⊙ |
| 0038 | K8929-1 | 0.753 | 1.0000 | 0.3925 |
| 0039 | K8945-1 | 0.143 | 1.0000 | 0.0751 |
| 0040 | -2 | 0.061 | 1.0000 | 0.0322 |
| 0041 | -3 | 0.538 1/50 | 1.0000 | 0.2805 |
| 0042 | MB2 | 0.004 | 1.0000 | 0.0027 |
| 0043 | LCS2 | 0.692 | 1.0000 | 0.3609 |
| 0044 | CCB4 | 0.004 | 1.0000 | 0.0027 |
| 0045 | CCV4 | 0.966 | 1.0000 | 0.5035 |
| 0046 | K9179-1 | 0.451 5/50 | 1.0000 | 0.2351 |
| 0047 | K9062-2 | 0.529 5/50 | 1.0000 | 0.2758 |
| 0048 | K9051-2 | 0.674 | 1.0000 | 0.3515 |
| 0049 | 2d | 0.681 | 1.0000 | 0.3552 |
| 0050 | -2MS | 0.548 10/50 | 1.0000 | 0.2858 |
| 0051 | -2MSd | 0.504 5/50 | 1.0000 | 0.2631 |

| | | | | |
|---|---|---|---|---|
| 0052 | 149151-1 | 0.054 | 1.0000 | 0.0285 |
| 0053 | -3 | 0.011 | 1.0000 | 0.0063 |
| 0054 | -4 | 0.058 | 1.0000 | 0.0306 |
| 0055 | -5 | 0.067 | 1.0000 | 0.0352 |
| 0056 | CCB6 | 0.007 | 1.0000 | 0.0037 |
| 0057 | CCV5 | 0.961 | 1.0000 | 0.5008 |
| 0058 | 149151-6 | 0.167 | 1.0000 | 0.0876 |
| 0059 | -7 | 0.142 | 1.0000 | 0.0741 |
| 0060 | -8 | 0.010 | 1.0000 | 0.0053 |
| 0061 | 149212-1 | 0.407 | 1.0000 | 0.2125 |
| 0062 | -2 | 0.291 | 1.0000 | 0.1517 |
| 0063 | -3 | 0.104 | 1.0000 | 0.0548 |
| 0064 | -4 | 0.329 | 1.0000 | 0.1717 |
| 0065 | -5 | 0.249 | 1.0000 | 0.1302 |
| 0066 | CCB6 ~~CCB6~~ | 0.007 | 1.0000 | 0.0041 |
| 0067 | CCV6 ~~CCV6~~ | 0.959 | 1.0000 | 0.4999 |

QIF 8/30/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118405
**Team**: GenChem
**Analyst**: IFRANKS

**Prep Workflow**: Gen Dig Phos
**Prep Method**: Method
**Rush/NPDES**: NPDES

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 08/27/2010 16:00
**Due Date**: 08/28/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1009047-20 | Method Blank | | 100 mL | 100 mL | | | |
| KQ1009047-24 | Method Blank | | 100 mL | 100 mL | | | |
| KQ1009047-18 | Lab Control Sample | | 100 mL | 100 mL | 10 mL | 17756 | |
| KQ1009047-22 | Lab Control Sample | | 100 mL | 100 mL | 10 mL | 17756 | |
| K1008747-001 | 0810ARLB007WS001 | .05 | 50 mL | 50 mL | | | |
| K1008747-002 | 0810ARLB007WS201 | .05 | 50 mL | 50 mL | | | |
| K1008747-003 | 0810ARLB004WS001 | .05 | 50 mL | 50 mL | | | |
| K1008747-003: KQ1009047-31 | Duplicate | .05 | 25 mL | 25 mL | | | |
| K1008747-003: KQ1009047-29 | Matrix Spike | .05 | 25 mL | 25 mL | 0.25 mL | 18561 | |
| K1008747-003: KQ1009047-30 | Duplicate Matrix Spike | .05 | 25 mL | 25 mL | 0.5 mL | 18561 | |
| K1008747-004 | 0810ARLB005WS001 | .05 | 50 mL | 50 mL | | | |
| K1008795-001 | NPDES Effluent | .01 | 50 mL | 50 mL | | | |
| K1008795-002 | NPDES Influent | .01 | 50 mL | 50 mL | | | |
| K1008857-002 | LPRC13A | .02 | 50 g | 50 mL | | | |
| K1008857-003 | LPRC07C-RB | .01 | 50 mL | 50 mL | | | |
| K1008881-001 | Effluent Comp | .01 | 50 mL | 50 mL | | | |
| K1008899-001 | 0810ARLB010WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-002 | 0810ARLB009WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-003 | 0810ARLB008WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-004 | 0810ARLB006WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-005 | 0810ARLB003WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-006 | 0810ARLB002WS001 | .06 | 50 mL | 50 mL | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K1008899-007 | 0810ARL8001WS001 | .06 | 50 mL | 50 mL | | | |
| K1008899-008 | 0810ARL8011WS001 | .06 | 50 mL | 50 mL | | | |
| K1008929-001 | 2010-08-19-E | .01 | 50 mL | 50 mL | | | |
| K1008964-001 | 0810NH100APC1WS001 | .03 | 50 mL | 50 mL | | | |
| KQ1009047-26 | Initial Calibration Blank | | 100 mL | 100 mL | | | |
| KQ1009047-28 | Initial Calibraton Verification | | 100 mL | 100 mL | | | |

28 Total Samples consisting of 19 Client Samples, 3 Client QC Samples, 6 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires |
|---|---|---|---|
| Phosphorus (Total) 100 ppm as P from Adenosine | Spike | 18561 | 11/1/2010 |
| Phosphorus, total LCS water | Spike | 17756 | 11/4/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 27-AUG-10 16:00 | 30-AUG-10 09:00 | IFRANKS | | N | |

## Comments

## Review

Reviewed by: _____ Date: 8/31/10

IF 8/27/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118415
**Team**: GenChem
**Analyst**: IFRANKS

**Prep Workflow**: Gen Dig Phos
**Prep Method**: Method
**Rush/NPDES**: Both

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 08/30/2010 09:00
**Due Date**: 09/03/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| K1008945-001 | Nitric Acid Rinsewater | .12 | 50 mL | 50 mL | | | |
| K1008945-002 | Everite II Rinsewater | .12 | 50 mL | 50 mL | | | |
| K1008945-003 | DS9-333 Rinsewater | .12 | 50 mL | 50 mL | | | |
| K1009062-002 | Effluent Comp | .03 | 50 mL | 50 mL | | | |
| K1009081-002 | SSL-6 | .05 | 50 mL | 50 mL | | | |
| K1009081-002: KQ1009050-03 | Duplicate | .05 | 50 mL | 50 mL | | | |
| K1009081-002: KQ1009050-01 | Matrix Spike | .05 | 25 mL | 25 mL | 0.25 mL | 18561 | |
| K1009081-002: KQ1009050-02 | Duplicate Matrix Spike | .05 | 25 mL | 25 mL | 0.5 mL | 18561 | |
| K1009151-001 | MAT010 | .03 | 50 mL | 50 mL | | | |
| K1009151-003 | JNS050 | .03 | 50 mL | 50 mL | | | |
| K1009151-004 | CHL010 | .03 | 50 mL | 50 mL | | | |
| K1009151-005 | RCN050 | .03 | 50 mL | 50 mL | | | |
| K1009151-006 | BRZ010 | .03 | 50 mL | 50 mL | | | |
| K1009151-007 | BRZ010A | .03 | 50 mL | 50 mL | | | |
| K1009151-008 | BRZ010B | .03 | 50 mL | 50 mL | | | |
| K1009179-001 | Effluent Comp | .01 | 50 mL | 50 mL | | | |
| K1009212-001 | GEE 050 | .03 | 50 mL | 50 mL | | | |
| K1009212-002 | WPL 050 | .03 | 50 mL | 50 mL | | | |
| K1009212-003 | CUR 020 | .03 | 50 mL | 50 mL | | | |
| K1009212-004 | MIL 010 | .03 | 50 mL | 50 mL | | | |
| K1009212-005 | CGR 020 | .03 | 50 mL | 50 mL | | | |

21 Total Samples consisting of 18 Client Samples, 3 Client QC Samples, 0 Batch QC Samples

associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires |
|---|---|---|---|
| Phosphorus (Total) 100 ppm as P from Adenosine | Spike | 18561 | 11/1/2010 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 30-AUG-10 09:00 | 30-AUG-10 10:00 | IFRANKS | | N | |

## Comments

## Review

Reviewed by: HC Date: 8/31/10

IF 8/30/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: K8747, K8899, K8964, K8881

Method: EPA 365.3

Analysis: Total Phosphorus

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 8/27/10 | MB1 | 100 | 100 | | | | |
| | LCS1 | | | | | | |
| | ICB | | | | | | |
| | ICV | | | | | | |
| | K10V8747-1 | 50 | 50 | | | | |
| | -2 | | | | | | |
| | -3 | | | | | | |
| | -3d | 25 | 25 | | | | |
| | -3MS | | | | | | |
| | -3MSd | | | | | | |
| | K8899-1 | 50 | 50 | | | | |
| | -2 | | | | | | |
| | -3 | | | | | | |
| | -4 | | | | | | |
| | -5 | | | | | | |
| | -6 | | | | | | |
| | -7 | | | | | | |
| | -8 | | | | | | |
| | K8881-1 | 50 | 50 | | | | |
| | K8964-1 | | | | | | |
| | K8747-4 | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

LCS T.V. = 2.23 APG: Lot #: ID #: PO4/3-79-C

Spike( - s) = ml x ppm P / ICV ID #: PO4/3-95-C N=0.4p

Comments: Curve ID#: PO4/3-5W

Spike = 0.25 x 100 ppm / 25 ml = ~~ppm~~ 1.0 ppm x =

Spike dup = 0.50 x 100 ppm / 25 ml = 2.0 ppm RPD =

Standard ID #: Spike ID#: PO4/3-79-C Spike Rec. =

CCV ID#: PO4/3-25-2 N=0.50 ppm Spike Dup Rec. =

| | | | |
|---|---|---|---|
| Prepared By: | [signature] | Date Prepared: | 8/27/10 ✓ ppm |
| Analyzes By: | [signature] | Date Analyzed: | 8/30/10 |
| Reviewed By: | [signature] | Date Reviewed: | 8/31/10 |

✓ LF 8/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: K8795, K8857, K8929, K8945, K9179, K9062, K9081, K9157, K9212 Method: EPA 365.3

Analysis: Total Phosphorus

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 8/30/10 | MB2 | 10 | 10 | | | | |
| — | LCS2 | 10 | 100 | | | | |
| | K8795-1 | 50 | 50 | | | | |
| | -2 | | | | | | |
| | K8857-3 | | | | | | |
| | K8929-1 | | | | | | |
| | K8945-1 | | | | | | |
| | -2 | | | | | | |
| | -3 | | | | | | |
| | K9179-1 | | | | | | |
| | K9062-2 | | | | | | |
| | K9081-2 | | | | | | |
| | -2D | | | | | | |
| | -2MS | | | | | | |
| | -2MSD | | | | | | |
| | K9157-1 | | | | | | |
| | -3 | | | | | | |
| | -4 | | | | | | |
| | -5 | | | | | | |
| | -6 | | | | | | |
| | -7 | | | | | | |
| | -8 | | | | | | |
| | K9212-1 | | | | | | |
| | | | | | | | |

LCS T.V. = APG: Lot #: ID #:

Spike( - s) = ml x ppm P /

Comments:

x =

RPD =

Standard ID #: Spike Rec. =

Spike Dup Rec. =

| | | | |
|---|---|---|---|
| Prepared By: | [signature] | Date Prepared: | 8/30/10 9AM |
| Analyzes By: | [signature] | Date Analyzed: | 8/30/10 |
| Reviewed By: | [signature] | Date Reviewed: | 8/31/10 |

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: EPA 365.3

Analysis: Total Phosphorus

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| | MB | | | | | | |
| 8/30/10 | K9219-2 | 50 | 50 | | | | |
| | -3 | | | | | | |
| | -4 | | | | | | |
| | -5 | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

LCS T.V. = APG: Lot #: ID #:

Spike( - s) = ml x ppm P /

Comments:

x =

RPD =

Standard ID #: Spike Rec. =

Spike Dup Rec. =

| | | | |
|---|---|---|---|
| Prepared By: | [illegible] | Date Prepared: | 8/30/10 [illegible] |
| Analyzes By: | | Date Analyzed: | |
| Reviewed By: | [illegible] | Date Reviewed: | 8/31/10 |

Work Request # Original (K8685), K 8557

Tier: I III

Date Analyzed: 9/8/10

Analyst: [illegible]

Analysis: TPHDS (365.3M)

RDN # 214748, 215511.

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | | |
|---|---|---|---|
| 1. | Is the method name and number correct and appropriate? | | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | | yes/no/NA |
| 3. | Are calculations correct? | | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | | yes/no/NA |
| 5. | All quality control criteria met? | | yes/no/NA |
| | a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| | b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| | c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| | d. | Are results for methods blanks all ND? | yes/no/NA |
| | e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| | f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | | yes/no/NA |
| 7. | Are all samples labelled correctly? | | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | | yes/no/NA |

**COMMENTS:**

12. Samples were reanalyzed as instructed by Mike Shelton
- modified sample weight from 10 g to 1 g
- modified digestion process - modified by not diluting digestate (added some water) until after digestion complete
- modified spike volume

Final Approved by: [illegible] Date: 9/10/10

DQREPORT

R:\WET\FORMS\LAB\DATAQUAL.DOC

# Analytical Results Summary

**Instrument Name:** K-UV-VIS-01 **Analyst:** IFRANKS **Analysis Lot:** 214748 **Method/Testcode:** 365.3M/Phos Tot

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1008685-001 | Phosphorus, Total | N/A | | Sediment | 0.30 mg/L | 726.53 | 1910 mg/Kg | 25 | 0.3 | 6.6 | | | 9/8/10 12:30:00 | N | V |
| K1008685-002 | Phosphorus, Total | N/A | | Sediment | 0.24 mg/L | 513.85 | 1300 mg/Kg | 25 | 0.3 | 6.3 | | | 9/8/10 12:30:00 | N | V |
| K1008685-003 | Phosphorus, Total | N/A | | Sediment | 0.27 mg/L | 601.17 | 1740 mg/Kg | 25 | 0.3 | 7.2 | | | 9/8/10 12:30:00 | N | V |
| K1008685-004 | Phosphorus, Total | N/A | | Sediment | 0.21 mg/L | 487.20 | 1270 mg/Kg | 25 | 0.3 | 6.5 | | | 9/8/10 12:30:00 | N | V |
| K1008685-005 | Phosphorus, Total | N/A | | Sediment | 0.33 mg/L | 694.72 | 1770 mg/Kg | 25 | 0.3 | 6.4 | | | 9/8/10 12:30:00 | N | V |
| K1008685-006 | Phosphorus, Total | N/A | | Sediment | 0.19 mg/L | 444.44 | 1280 mg/Kg | 25 | 0.3 | 7.2 | | | 9/8/10 12:30:00 | N | V |
| K1008685-007 | Phosphorus, Total | N/A | | Sediment | 0.21 mg/L | 497.09 | 1240 mg/Kg | 25 | 0.3 | 6.2 | | | 9/8/10 12:30:00 | N | V |
| K1008685-008 | Phosphorus, Total | N/A | | Sediment | 0.33 mg/L | 748.97 | 2560 mg/Kg | 25 | 0.4 | 8.6 | | | 9/8/10 12:30:00 | N | V |
| K1008685-009 | Phosphorus, Total | N/A | | Sediment | 0.35 mg/L | 759.88 | 2190 mg/Kg | 25 | 0.3 | 7.2 | | | 9/8/10 12:30:00 | N | V |
| K1008685-010 | Phosphorus, Total | N/A | | Sediment | 0.28 mg/L | 690.37 | 1900 mg/Kg | 25 | 0.3 | 6.9 | | | 9/8/10 12:30:00 | N | V |
| K1008685-011 | Phosphorus, Total | N/A | | Sediment | 0.28 mg/L | 695.43 | 1910 mg/Kg | 25 | 0.3 | 6.8 | | | 9/8/10 12:30:00 | N | V |
| K1008685-012 | Phosphorus, Total | N/A | | Sediment | 0.49 mg/L | 1073.79 | 3190 mg/Kg | 25 | 0.3 | 7.4 | | | 9/8/10 12:30:00 | N | V |
| K1008685-013 | Phosphorus, Total | N/A | | Sediment | 0.45 mg/L | 950.67 | 3140 mg/Kg | 25 | 0.4 | 8.3 | | | 9/8/10 12:30:00 | N | V |
| K1008685-014 | Phosphorus, Total | N/A | | Sediment | 0.39 mg/L | 923.74 | 3260 mg/Kg | 25 | 0.4 | 8.8 | | | 9/8/10 12:30:00 | N | V |
| K1008685-015 | Phosphorus, Total | N/A | | Sediment | 0.44 mg/L | 967.25 | 2890 mg/Kg | 25 | 0.3 | 7.5 | | | 9/8/10 12:30:00 | N | V |
| K1008685-016 | Phosphorus, Total | N/A | | Sediment | 0.18 mg/L | 382.31 | 560 mg/Kg | 25 | 0.2 | 3.7 | | | 9/8/10 12:30:00 | N | V |
| K1008685-017 | Phosphorus, Total | N/A | | Sediment | 0.41 mg/L | 869.67 | 2790 mg/Kg | 25 | 0.4 | 8.0 | | | 9/8/10 12:30:00 | N | V |
| K1008685-018 | Phosphorus, Total | N/A | | Sediment | 0.25 mg/L | 1098.88 | 3120 mg/Kg | 50 | 1 | 14 | | | 9/8/10 12:30:00 | N | V |
| K1008685-019 | Phosphorus, Total | N/A | | Sediment | 0.48 mg/L | 1114.18 | 3090 mg/Kg | 25 | 0.3 | 6.9 | | | 9/8/10 12:30:00 | N | V |
| K1008685-020 | Phosphorus, Total | N/A | | Sediment | 0.25 mg/L | 535.82 | 1010 mg/Kg | 25 | 0.2 | 4.7 | | | 9/8/10 12:30:00 | N | V |
| K1008857-001 | Phosphorus, Total | N/A | | Sediment | 0.33 mg/L | 816.89 | 1240 mg/Kg | 25 | 0.2 | 3.8 | | | 9/8/10 12:30:00 | N | V |
| KQ1009009-01 | Phosphorus, Total | LCS | | Sediment | 0.48 mg/L | 478.22 | 478 mg/Kg | 5 | 0.02 | 0.50 | 94 | | 9/8/10 12:30:00 | N | V |
| KQ1009009-02 | Phosphorus, Total | MB | | Sediment | 0.01 mg/L | 0.05 | 0.05 mg/Kg J | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009009-03 | Phosphorus, Total | ICB | | Sediment | 0.00 mg/L | 0.00 | 0.10 mg/Kg U | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009009-04 | Phosphorus, Total | ICV | | Sediment | 0.41 mg/L | 0.41 | 0.41 mg/Kg | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009009-05 | Phosphorus, Total | LCS | | Sediment | 0.53 mg/L | 531.08 | 531 mg/Kg | 5 | 0.02 | 0.50 | 104 | | 9/8/10 12:30:00 | N | V |
| KQ1009009-06 | Phosphorus, Total | MB | | Sediment | 0.01 mg/L | 0.08 | 0.08 mg/Kg J | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009009-07 | Phosphorus, Total | MS | K1008685-001 | Sediment | 0.35 mg/L | 1667.78 | 4390 mg/Kg | 50 | 1 | 13 | 99 | | 9/8/10 12:30:00 | N | V |
| KQ1009009-08 | Phosphorus, Total | DMS | K1008685-001 | Sediment | 0.54 mg/L | 2466.21 | 6490 mg/Kg | 50 | 1 | 13 | 95 | 39* | 9/8/10 12:30:00 | N | V |
| KQ1009009-09 | Phosphorus, Total | DUP | K1008685-001 | Sediment | 0.35 mg/L | 719.05 | 1890 mg/Kg | 25 | 0.3 | 6.6 | | 1 | 9/8/10 12:30:00 | N | V |
| KQ1009011-01 | Phosphorus, Total | MS | K1008857-001 | Sediment | 0.36 mg/L | 1662.31 | 2510 mg/Kg | 50 | 0.4 | 7.6 | 91 | | 9/8/10 12:30:00 | N | V |
| KQ1009011-02 | Phosphorus, Total | DMS | K1008857-001 | Sediment | 0.55 mg/L | 2318.26 | 3510 mg/Kg | 50 | 0.4 | 7.6 | 89 | 33* | 9/8/10 12:30:00 | N | V |
| KQ1009011-03 | Phosphorus, Total | DUP | K1008857-001 | Sediment | 0.34 mg/L | 717.93 | 1090 mg/Kg | 25 | 0.2 | 3.8 | | 13* | 9/8/10 12:30:00 | N | V |
| KQ1009012-01 | Phosphorus, Total | CCB | | Sediment | 0.01 mg/L | | 0.65 mg/Kg | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009012-02 | Phosphorus, Total | CCB | | Sediment | 0.01 mg/L | | 0.79 mg/Kg | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009012-03 | Phosphorus, Total | CCB | | Sediment | 0.01 mg/L | | 0.93 mg/Kg | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009012-04 | Phosphorus, Total | CCB | | Sediment | 0.01 mg/L | | 0.86 mg/Kg | 1 | 0.01 | 0.10 | | | 9/8/10 12:30:00 | N | V |
| KQ1009012-07 | Phosphorus, Total | CCV | | Sediment | 0.51 mg/L | | .5097 mg/Kg | 1 | 0.01 | 0.10 | 102% | | 9/8/10 12:30:00 | N | V |
| KQ1009012-08 | Phosphorus, Total | CCV | | Sediment | 0.51 mg/L | | .5131 mg/Kg | 1 | 0.01 | 0.10 | 103% | | 9/8/10 12:30:00 | N | V |

83

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

MU 9/10

# Analytical Results Summary

**Instrument Name:** K-UV-VIS-01 **Analyst:** IFRANKS **Analysis Lot:** 214748 **Method/Testcode:** 365.3M/Phos Tot

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KQ1009012-09 | Phosphorus, Total | CCV | | Sediment | 0.52 mg/L | | .5150 mg/Kg | 1 | 0.01 | 0.10 | 103% | | 9/8/10 12:30:00 | N | V |
| KQ1009012-10 | Phosphorus, Total | CCV | | Sediment | 0.52 mg/L | | .5161 mg/Kg | 1 | 0.01 | 0.10 | 103% | | 9/8/10 12:30:00 | N | V |

84

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-UV-VIS-01 **Analyst:** IFRANKS **Analysis Lot:** 215511 **Method/Testcode:** 365.3M/Phos Tot

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1008857-002 | Phosphorus, Total | N/A | | Sediment | 0.47 mg/L | 987.73 | 1350 mg/Kg | 25 | 0.2 | 3.4 | | | 9/8/10 12:30:00 | N | V |

85

Not adjusted for changes in units
* indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

1230PM

IF 9/8/10
TPHOS

DU520 S/N: 0112U2001732 1.03
08-SEP-10 13:05:57 SCA
Wavelength: 650.0 nm
Formula: A=a+bC a: -0.0114 b: 1.9748

| mg/L | Net A | r2=0.999 Var=0.0004 |
|---|---|---|
| 0.0000 | -0.000 | |
| 0.0100 | 0.028 | |
| 0.0500 | 0.061 | |
| 0.1000 | 0.168 | |
| 0.2000 | 0.389 | |
| 0.5000 | 0.992 | |
| 0.7000 | 1.362 | |

IF 9/8/10

TPHOS

K 8685, K 8857

DU520 S/N: 0112U2001732 1.03
08-SEP-10 13:09:29 SCA Group 1437
Wavelength: 650.0 nm
Formula: A=a+bC a: -0.0114 b: 1.9748

| Sample | | Net A | Dil X | mg/L |
|---|---|---|---|---|
| 0001 | ICB | -0.002 | 1.0000 | 0.0048 |
| 0002 | ICV | 0.797 | 1.0000 | 0.4091 |
| 0003 | CCB1 | 0.001 | 1.0000 | 0.0065 |
| 0004 | CCV1 | 0.995 | 1.0000 | 0.5097 |
| 0005 | MB | -0.000 | 1.0000 | 0.0055 |
| 0006 | LCS | 0.934 1/5 | 1.0000 | 0.4787 |
| 0007 | K8685-1 | 0.581 2/50 | 1.0000 | 0.3000 |
| 0008 | -1d | 0.670 2/50 | 1.0000 | 0.3450 |
| 0009 | -1MS | 0.681 1/50 | 1.0000 | 0.3507 |
| 0010 | -1MSd | 1.048 1/50 | 1.0000 | 0.5365 |
| 0011 | -2 | 0.472 2/50 | 1.0000 | 0.2448 |
| 0012 | -3 | 0.520 2/50 | 1.0000 | 0.2693 |
| 0013 | -4 | 0.412 2/50 | 1.0000 | 0.2146 |
| 0014 | -5 | 0.647 2/50 | 1.0000 | 0.3333 |
| 0015 | CCB2 | 0.004 | 1.0000 | 0.0079 |
| 0016 | CCV2 | 1.002 | 1.0000 | 0.5131 |
| 0017 | K8685-6 | 0.365 2/50 | 1.0000 | 0.1904 |
| 0018 | -7 | 0.400 2/50 | 1.0000 | 0.2085 |
| 0019 | -8 | 0.648 2/50 | 1.0000 | 0.3338 |
| 0020 | -9 | 0.684 2/50 | 1.0000 | 0.3524 |
| 0021 | -10 | 0.539 2/50 | 1.0000 | 0.2788 |
| 0022 | -11 | 0.541 2/50 | 1.0000 | 0.2797 |
| 0023 | -12 | 0.953 2/50 | 1.0000 | 0.4881 |
| 0024 | -13 | 0.872 2/50 | 1.0000 | 0.4475 |
| 0025 | -14 | 0.768 2/50 | 1.0000 | 0.3944 |
| 0026 | -15 | 0.858 2/50 | 1.0000 | 0.4401 |
| 0027 | CCB3 | 0.007 | 1.0000 | 0.0093 |
| 0028 | CCV3 | 1.006 | 1.0000 | 0.5150 |
| 0029 | K8685-16 | 0.346 2/50 | 1.0000 | 0.1810 |
| 0030 | -17 | 0.808 2/50 | 1.0000 | 0.4149 |
| 0031 | -18 | 0.483 1/50 | 1.0000 | 0.2505 |
| 0032 | -19 | 0.944 2/50 | 1.0000 | 0.4840 |
| 0033 | -20 | 0.476 2/50 | 1.0000 | 0.2468 |
| 0034 | MB2 | 0.005 | 1.0000 | 0.0084 |
| 0035 | LCS2 | 1.038 1/5 | 1.0000 | 0.5314 |
| 0036 | K8857-1 | 0.649 2/50 | 1.0000 | 0.3345 |
| 0037 | -1d | 0.650 2/50 | 1.0000 | 0.3351 |
| 0038 | | ~~0.458~~ | ~~1.0000~~ | ~~0.2376~~ |
| 0039 | -1MS | 0.692 1/50 | 1.0000 | 0.3560 |
| 0040 | -1MSd | 1.072 1/50 | 1.0000 | 0.5485 |
| 0041 | -2 | 0.914 2/50 | 1.0000 | 0.4685 |
| 0042 | CCB4 | 0.006 | 1.0000 | 0.0086 |
| 0043 | CCV4 | 1.008 | 1.0000 | 0.5161 |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118355
**Team**: GenChem
**Analyst**: IFRANKS
**Prep Workflow**: Gen Dig Phos
**Prep Method**: Method
**Rush/NPDES**: N/A
**Status**: Prepped
**Current Step**: Digestion
**Prep Date**: 09/07/2010 16:30
**Due Date**: 08/30/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1009009-02 | Method Blank | | 10.010 g | 100 mL | | | |
| KQ1009009-06 | Method Blank | | 10.051 g | 100 mL | | | |
| KQ1009009-01 | Lab Control Sample | | 0.5005 g | 100 mL | 0.5005 g | 16802 | |
| KQ1009009-05 | Lab Control Sample | | 0.5003 g | 100 mL | 0.5003 g | 16802 | |
| K1008685-001 | LPRC02A | .02 | 1.0323 g | 100 mL | | | |
| K1008685-001: KQ1009009-09 | Duplicate | .02 | 1.1995 g | 100 mL | | | |
| K1008685-001: KQ1009009-07 | Matrix Spike | .02 | 1.0514 g | 100 mL | 10 mL | 18561 | |
| K1008685-001: KQ1009009-08 | Duplicate Matrix Spike | .02 | 1.0877 g | 100 mL | 20 mL | 18561 | |
| K1008685-002 | LPRC03A | .02 | 1.1910 g | 100 mL | | | |
| K1008685-003 | LPRC03B | .02 | 1.1199 g | 100 mL | | | |
| K1008685-004 | LPRC02B | .02 | 1.1012 g | 100 mL | | | |
| K1008685-005 | LPRC04A | .02 | 1.1994 g | 100 mL | | | |
| K1008685-006 | LPRC04B | .02 | 1.0710 g | 100 mL | | | |
| K1008685-007 | LPRC04C | .02 | 1.0486 g | 100 mL | | | |
| K1008685-008 | LPRC04D | .02 | 1.1142 g | 100 mL | | | |
| K1008685-009 | LPRC05B | .02 | 1.1594 g | 100 mL | | | |
| K1008685-010 | LPRC05A | .02 | 1.0096 g | 100 mL | | | |
| K1008685-011 | LPRC05A-FD | .02 | 1.0855 g | 100 mL | | | |
| K1008685-012 | LPRC07A | .02 | 1.1364 g | 100 mL | | | |
| K1008685-013 | LPRC07B | .02 | 1.1768 g | 100 mL | | | |
| K1008685-014 | LPRC07D | .02 | 1.0674 g | 100 mL | | | |
| K1008685-015 | LPRC06A | .02 | 1.1375 g | 100 mL | | | |

Samples digested as SOP except 1g + 20mL water + 2mL $H_2SO_4$ + persulfate - autoclave final dilution 100mL

MKS 9/10/10

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K1008685-016 | LPRC15A | .02 | 1.1836 g | 100 mL | | | |
| K1008685-017 | LPRC08A | .02 | 1.1927 g | 100 mL | | | |
| K1008685-018 | LPRC09A | .02 | 1.1398 g | 100 mL | | | |
| K1008685-019 | LPRC10A | .02 | 1.0860 g | 100 mL | | | |
| K1008685-020 | LPRC12A | .02 | 1.1515 g | 100 mL | | | |
| KQ1009009-03 | Initial Calibration Blank | | 100 mL | 100 mL | | | |
| KQ1009009-04 | Initial Calibraton Verification | | 100 mL | 100 mL | | | |

29 Total Samples consisting of 20 Client Samples, 3 Client QC Samples, 6 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Phosphorus (Total) 100 ppm as P from Adenosine | Spike | 18561 | 11/1/2010 | Phosphorus, total (Nutrients in soil) | Spike | 16802 | 3/16/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 07-SEP-10 16:30 | 07-SEP-10 17:30 | IFRANKS | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

510 mg/kg

IF 9/7/10

MIS 9/10/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118358
**Team**: GenChem
**Analyst**: IFRANKS

**Prep Workflow**: Gen Dig Phos
**Prep Method**: Method
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 09/07/2010 16:30
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| K1008857-001 | LPRC07C | .02 | 1.0237 g | 100 mL | | | |
| K1008857-001: KQ1009011-03 | Duplicate | .02 | 1.1669 g | 100 mL | | | |
| K1008857-001: KQ1009011-01 | Matrix Spike | .02 | 1.0708 g | 100 mL | 10 mL | 18561 | |
| K1008857-001: KQ1009011-02 | Duplicate Matrix Spike | .02 | 1.1830 g | 100 mL | 20 mL | 18561 | |

4 Total Samples consisting of 1 Client Sample, 3 Client QC Samples, 0 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires |
|---|---|---|---|
| Phosphorus (Total) 100 ppm as P from Adenosine | Spike | 18561 | 11/1/2010 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 07-SEP-10 16:30 | 07-SEP-10 17:30 | IFRANKS | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

IF. 9/7/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: K8685, K8857 Method: EPA 365.3

Analysis: Total Phosphorus

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 9/7/10 | MB1 | 10.010 | 100 | | | | |
| | MB2 | 10.051 | | | | | |
| | LCS1 | 0.5005 | | | | | |
| | LCS2 | 0.5003 | | | | | |
| | ICB | 100 ml | | | | | |
| | ICV | ↓ | | | | | |
| | K8685-1 | 1.0323 | | | | | |
| | -1d | 1.1995 | | | | | |
| | -1MS | 1.0574 | | | | | |
| | -1MSd | 1.0877 | | | | | |
| | -3 | 1.1109 | | | | | |
| | -4 | 1.1012 | | | | | |
| | -5 | 1.1994 | | | | | |
| | -6 | 1.0710 | | | | | |
| | -7 | 1.0486 | | | | | |
| | -8 | 1.1142 | | | | | |
| | -9 | 1.1544 | | | | | |
| | -10 | 1.0096 | | | | | |
| | -11 | 1.0055 | | | | | |
| | -12 | 1.1364 | | | | | |
| | -13 | 1.1768 | | | | | |
| | -14 | 1.0674 | | | | | |
| | -15 | 1.1775 | | | | | |
| | K8685-2 | 1.1910 | | | | | |

LCS T.V. = 570 APG: Lot #: LCS ID #: PO3/3-71-B

Spike( - s) = ml x ppm P / Curve ID#: PO3/3-5-BB

CCV ID #: PO3/3-25-OG

Comments:

K8685 Spike = 10 ml x 100 ppm / 1.0574 10.78 = 2508 ppm x =

Spike dup 20 ml x 100 ppm / 1.0877 10.78 = 4879 ppm RPD =

Standard ID #: Spike ID#: PO3/3-74-C Spike Rec. =

ICV ID#: PO3/3-95-F Spike Dup Rec. =

| | | | |
|---|---|---|---|
| Prepared By: | [signature] | Date Prepared: | 9/7/10 4:30 pm |
| Analyzes By: | [signature] | Date Analyzed: | 9/9/10 |
| Reviewed By: | | Date Reviewed: | |

0 IF 9/7/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: Method: EPA 365.3

Analysis: Total Phosphorus

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 9/7/10 | MB | | | | | | |
| | K8285-16 | 1.1876 | 100 ml | | | | |
| | -17 | 1.1727 | | | | | |
| | -18 | 1.1608 | | | | | |
| | -19 | 1.0860 | | | | | |
| | -20 | 1.1575 | | | | | |
| | K8557-1 | 1.0277 | | | | | |
| | -1d | 1.1669 | | | | | |
| | -1ms | 1.0708 | | | | | |
| | -1msd | 1.1870 | | | | | |
| | -2 | 1.1858 | | | | | |

LCS T.V. = APG: Lot #: ID #:

Spike( - s) = ml x ppm P /

Comments:

K8557: Spike dup = 20 x 100 ppm / 1.1870 / 0.661 = 2538 ppm

Spike = 10 x 100 ppm / 1.0708 / 0.661 = 1413 ppm

RPD = 470 ppm

Standard ID #: Spike Rec. =

Spike Dup Rec. =

| | | | |
|---|---|---|---|
| Prepared By: | | Date Prepared: | 9/7/10 |
| Analyzes By: | | Date Analyzed: | 9/8/10 |
| Reviewed By: | | Date Reviewed: | |

Work Request # (Original K8685) K8857

Tier: III III

Date Analyzed: 08/19/10

Analyst: [illegible]

Analysis: $NH_3$-N -350.1M

213439

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

Final Approved by: MIS Date: 8/26/10

DOREPORT

# Analytical Results Summary

**nstrument Name:** K-FIA-01 **Analyst:** THANGANU **Analysis Lot:** 213439 **Method/Testcode:** 350.1M/Ammonia

| b Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 008685-001 | Ammonia as Nitrogen | N/A | | Sediment | 3.83 mg/L | 19.03 | 50.1 mg/Kg | 1 | 0.2 | 1.3 | | | 8/19/10 16:11:00 | N | V |
| 008685-002 | Ammonia as Nitrogen | N/A | | Sediment | 2.25 mg/L | 11.21 | 28.4 mg/Kg | 1 | 0.2 | 1.3 | | | 8/19/10 16:11:00 | N | V |
| 008685-003 | Ammonia as Nitrogen | N/A | | Sediment | 2.47 mg/L | 12.02 | 34.9 mg/Kg | 1 | 0.2 | 1.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-004 | Ammonia as Nitrogen | N/A | | Sediment | 1.84 mg/L | 9.20 | 23.9 mg/Kg | 1 | 0.2 | 1.3 | | | 8/19/10 16:11:00 | N | V |
| 008685-005 | Ammonia as Nitrogen | N/A | | Sediment | 1.59 mg/L | 7.93 | 20.2 mg/Kg | 1 | 0.2 | 1.3 | | | 8/19/10 16:11:00 | N | V |
| 008685-006 | Ammonia as Nitrogen | N/A | | Sediment | 1.37 mg/L | 6.83 | 19.6 mg/Kg | 1 | 0.2 | 1.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-007 | Ammonia as Nitrogen | N/A | | Sediment | 1.51 mg/L | 7.43 | 18.5 mg/Kg | 1 | 0.1 | 1.2 | | | 8/19/10 16:11:00 | N | V |
| 008685-008 | Ammonia as Nitrogen | N/A | | Sediment | 1.51 mg/L | 37.14 | 127 mg/Kg | 5 | 0.7 | 8.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-009 | Ammonia as Nitrogen | N/A | | Sediment | 4.45 mg/L | 21.88 | 63.1 mg/Kg | 1 | 0.2 | 1.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-010 | Ammonia as Nitrogen | N/A | | Sediment | 2.35 mg/L | 11.62 | 32.0 mg/Kg | 1 | 0.2 | 1.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-011 | Ammonia as Nitrogen | N/A | | Sediment | 2.60 mg/L | 12.56 | 34.4 mg/Kg | 1 | 0.2 | 1.3 | | | 8/19/10 16:11:00 | N | V |
| 008685-012 | Ammonia as Nitrogen | N/A | | Sediment | 1.58 mg/L | 38.64 | 115 mg/Kg | 5 | 0.6 | 7.2 | | | 8/19/10 16:11:00 | N | V |
| 008685-013 | Ammonia as Nitrogen | N/A | | Sediment | 2.09 mg/L | 50.71 | 167 mg/Kg | 5 | 0.7 | 8.0 | | | 8/19/10 16:11:00 | N | V |
| 008685-014 | Ammonia as Nitrogen | N/A | | Sediment | 1.66 mg/L | 41.43 | 146 mg/Kg | 5 | 0.8 | 8.8 | | | 8/19/10 16:11:00 | N | V |
| 008685-015 | Ammonia as Nitrogen | N/A | | Sediment | 1.33 mg/L | 33.14 | 98.9 mg/Kg | 5 | 0.6 | 7.4 | | | 8/19/10 16:11:00 | N | V |
| 008685-016 | Ammonia as Nitrogen | N/A | | Sediment | 2.33 mg/L | 11.42 | 16.7 mg/Kg | 1 | 0.06 | 0.72 | | | 8/19/10 16:11:00 | N | V |
| 008685-017 | Ammonia as Nitrogen | N/A | | Sediment | 4.40 mg/L | 21.99 | 70.5 mg/Kg | 1 | 0.2 | 1.6 | | | 8/19/10 16:11:00 | N | V |
| 008685-018 | Ammonia as Nitrogen | N/A | | Sediment | 1.15 mg/L | 28.73 | 81.6 mg/Kg | 5 | 0.6 | 7.1 | | | 8/19/10 16:11:00 | N | V |
| 008685-019 | Ammonia as Nitrogen | N/A | | Sediment | 1.58 mg/L | 39.26 | 109 mg/Kg | 5 | 0.6 | 6.9 | | | 8/19/10 16:11:00 | N | V |
| 008685-020 | Ammonia as Nitrogen | N/A | | Sediment | 2.06 mg/L | 10.22 | 19.2 mg/Kg | 1 | 0.08 | 0.93 | | | 8/19/10 16:11:00 | N | V |
| 008857-001 | Ammonia as Nitrogen | N/A | | Sediment | 1.58 mg/L | 7.77 | 11.7 mg/Kg | 1 | 0.06 | 0.75 | | | 8/19/10 16:11:00 | N | V |
| 008857-002 | Ammonia as Nitrogen | N/A | | Sediment | 0.12 mg/L | 0.59 | 0.81 mg/Kg | 1 | 0.06 | 0.68 | | | 8/19/10 16:11:00 | N | V |
| )1008532-01 | Ammonia as Nitrogen | LCS | | Sediment | 2.82 mg/L | 14.09 | 14.1 mg/Kg | 1 | 0.04 | 0.50 | 99 | | 8/19/10 16:11:00 | N | V |
| )1008532-02 | Ammonia as Nitrogen | MB | | Sediment | 0.00 mg/L | -0.02 | 0.50 mg/Kg U | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| )1008532-03 | Ammonia as Nitrogen | MS | K1008685-001 | Sediment | 1.92 mg/L | 476.99 | 1260 mg/Kg | 50 | 6 | 65 | 92 | | 8/19/10 16:11:00 | N | V |
| )1008532-04 | Ammonia as Nitrogen | DMS | K1008685-001 | Sediment | 1.97 mg/L | 492.41 | 1300 mg/Kg | 50 | 6 | 66 | 95 | 3 | 8/19/10 16:11:00 | N | V |
| )1008532-05 | Ammonia as Nitrogen | DUP | K1008685-001 | Sediment | 3.67 mg/L | 18.13 | 47.7 mg/Kg | 1 | 0.2 | 1.3 | | 5 | 8/19/10 16:11:00 | N | V |
| )1008534-01 | Ammonia as Nitrogen | LCS | | Sediment | 2.81 mg/L | 14.03 | 14.0 mg/Kg | 1 | 0.04 | 0.50 | 98 | | 8/19/10 16:11:00 | N | V |
| )1008534-02 | Ammonia as Nitrogen | MB | | Sediment | 0.00 mg/L | -0.01 | 0.50 mg/Kg U | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| )1008534-03 | Ammonia as Nitrogen | MS | K1008685-016 | Sediment | 2.00 mg/L | 499.00 | 731 mg/Kg | 50 | 3 | 36 | 98 | | 8/19/10 16:11:00 | N | V |
| )1008534-04 | Ammonia as Nitrogen | DMS | K1008685-016 | Sediment | 2.02 mg/L | 502.94 | 736 mg/Kg | 50 | 3 | 36 | 99 | 1 | 8/19/10 16:11:00 | N | V |
| )1008534-05 | Ammonia as Nitrogen | DUP | K1008685-016 | Sediment | 2.36 mg/L | 11.70 | 17.1 mg/Kg | 1 | 0.06 | 0.73 | | 2 | 8/19/10 16:11:00 | N | V |
| )1008534-06 | Ammonia as Nitrogen | MS | K1008857-001 | Sediment | 1.99 mg/L | 482.98 | 731 mg/Kg | 50 | 3 | 37 | 98 | | 8/19/10 16:11:00 | N | V |
| )1008534-07 | Ammonia as Nitrogen | DMS | K1008857-001 | Sediment | 2.00 mg/L | 499.08 | 755 mg/Kg | 50 | 4 | 38 | 98 | 3 | 8/19/10 16:11:00 | N | V |
| )1008534-08 | Ammonia as Nitrogen | DUP | K1008857-001 | Sediment | 1.58 mg/L | 7.73 | 11.7 mg/Kg | 1 | 0.06 | 0.74 | | <1 | 8/19/10 16:11:00 | N | V |
| )1008579-01 | Ammonia as Nitrogen | CCB | | Sediment | 0.02 mg/L | 0.12 | 0.12 mg/Kg J | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| )1008579-02 | Ammonia as Nitrogen | CCB | | Sediment | 0.00 mg/L | 0.02 | 0.50 mg/Kg U | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| )1008579-03 | Ammonia as Nitrogen | CCB | | Sediment | 0.01 mg/L | 0.05 | 0.05 mg/Kg J | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| )1008579-04 | Ammonia as Nitrogen | CCB | | Sediment | 0.01 mg/L | 0.07 | 0.07 mg/Kg J | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |

ot adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.



94

# Analytical Results Summary

**nstrument Name:** K-FIA-01 **Analyst:** THANGANU **Analysis Lot:** 213439 **Method/Testcode:** 350.1M/Ammonia

| ıb Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21008579-05 | Ammonia as Nitrogen | CCB | | Sediment | 0.01 mg/L | 0.04 | 0.50 mg/Kg U | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-06 | Ammonia as Nitrogen | CCB | | Sediment | 0.01 mg/L | 0.04 | 0.04 mg/Kg J | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-07 | Ammonia as Nitrogen | CCV | | Sediment | 1.97 mg/L 99% | 9.87 | 1.9735 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-08 | Ammonia as Nitrogen | CCV | | Sediment | 1.92 mg/L 96% | 9.59 | 1.9185 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-09 | Ammonia as Nitrogen | CCV | | Sediment | 1.94 mg/L 97% | 9.70 | 1.9391 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-10 | Ammonia as Nitrogen | CCV | | Sediment | 1.97 mg/L 99% | 9.86 | 1.9720 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-11 | Ammonia as Nitrogen | CCV | | Sediment | 1.97 mg/L 99% | 9.86 | 1.9717 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |
| 21008579-12 | Ammonia as Nitrogen | CCV | | Sediment | 1.97 mg/L 99% | 9.87 | 1.9738 mg/Kg | 1 | 0.04 | 0.50 | | | 8/19/10 16:11:00 | N | V |

K8685-1ms/1msd: Spike = 0.5mℓ x 10000ppm/10.07/0.380 = 1310
Spike Dup = 0.5mℓ x 10000ppm/10.01/0.380 = 1310

K8685-16ms/16msd: Spike = 0.5mℓ x 10000ppm/10.03/0.683 = 730
Spike Dup = 0.5mℓ x 10000ppm/10.04/0.683 = 729

K8857-1ms/1msd: Spike = 0.5mℓ x 10000ppm/10.31/0.661 = 734
Spike Dup = 0.5mℓ x 10000ppm/10.01/0.661 = 756

95

08/19/10
Thang

Not adjusted for changes in units
Indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117719 **Prep Workflow**: GenExt7Day **Status**: Prepped **Prep Date**: 08/19/2010 09:15
**Team**: GenChem **Prep Method**: CAS SOP **Current Step**: Extraction
**Analyst**: T.Hanganu **Rush/NPDES**: N/A **Due Date**: 08/31/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008534-02 | Method Blank | | 10.00 g | 50.00 mL | | | |
| KQ1008534-01 | Lab Control Sample | | 10.00 g | 50.00 mL | 10 mL | 19060 | |
| K1008685-016 | LPRC15A | .02 | 10.22 g | 50.00 mL | | | |
| K1008685-016: KQ1008534-05 | Duplicate | .02 | 10.09 g | 50.00 mL | | | |
| K1008685-016: KQ1008534-03 | Matrix Spike | .02 | 10.03 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008685-016: KQ1008534-04 | Duplicate Matrix Spike | .02 | 10.04 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008685-017 | LPRC08A | .02 | 10.01 g | 50.00 mL | | | |
| K1008685-018 | LPRC09A | .02 | 10.03 g | 50.00 mL | | | |
| K1008685-019 | LPRC10A | .02 | 10.03 g | 50.00 mL | | | |
| K1008685-020 | LPRC12A | .02 | 10.09 g | 50.00 mL | | | |
| K1008857-001 | LPRC07C | .02 | 10.15 g | 50.00 mL | | | |
| K1008857-001: KQ1008534-08 | Duplicate | .02 | 10.21 g | 50.00 mL | | | |
| K1008857-001: KQ1008534-06 | Matrix Spike | .02 | 10.31 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008857-001: KQ1008534-07 | Duplicate Matrix Spike | .02 | 10.01 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008857-002 | LPRC13A | .02 | 10.10 g | 50.00 mL | | | |

15 Total Samples consisting of 7 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires |
|---|---|---|---|
| Ammonia 10,000ppm N (10 mg/mL N) NH3 | Spike | 18061 | 11/20/2010 |
| NH3 / Ophos / NO3 LCS Mixture | Spike | 19060 | 12/25/2010 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 19-AUG-10 09:15 | 19-AUG-10 10:30 | T.Hanganu | | N | |

**Comments**

**Review**

Reviewed by: _____ Date: _____

08/19/10
Hougen

MC
8/26/10

K8685 1 K8857



# BRAN+LUEBBE

Post-run report

| | | | | |
|---|---|---|---|---|
| Name of Run | : | 100819E | Name of Analysis | :Ammonia.ANL |
| Date of Report | : | 8/19/2010 | System No. | :1 |
| Date of Run | : | 8/19/2010 | Type of System | :AA3 |
| Operator | : | | Start/Stop time | :16:11 - 17:39 |
| Comment | : | | | |

---

LCS ID#: B+LNH3/,-35-A T.V.=14.3
Spike ID#: B+LNH3/,-85-Z
Curve, CCV ID#: B+LNH3/,-56-K T.V.=2.00
MB MS=2.00

| | | |
|---|---|---|
| Channel | : | 2 |
| Method | : | Method 2 |
| Unit | : | mg/L |
| Calibr. Fit | : | Linear |
| Corr. Coeff. | : | 1.0000 |
| Base | : | -34320 |
| Gain | : | 18 |
| Sensitivity | : | 0.4279 |
| Sample Limit 1 | : | |
| Sample Limit 2 | : | |

| Pk | Cup | | Sample Id | | Value | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | B | Baseline | | -0.0241 | | |
| 1 | 1 | P | Primer | | 5.0050 | | |
| 2 | 1 | D | Drift | | 5.0062 | | |
| 3 | 1 | C | 5.00 | | 5.0096 | | |
| 4 | 2 | C | 2.00 | | 1.9763 | | |
| 5 | 3 | C | 0.50 | | 0.4971 | | |
| 6 | 4 | C | 0.05 | | 0.0493 | | |
| 7 | 5 | C | 0 | | 0.0177 | | |
| 8 | 0 | B | Baseline | | -0.0241 | | |
| 9 | 1 | H1 | High | | 5.0168 | | |
| 10 | 0 | L1 | Low | | -0.0175 | | |
| 11 | 0 | L1 | Low | | -0.0175 | | |
| 12 | 5 | QC2 | CCB1 | | 0.0243 | 0.0247 | 99% |
| 13 | 2 | QC1 | CCV1 | | 1.9735 | 1.97 | 99% |
| 14 | 10 | QC3 | LCS1*10 | 08/17/10 | 2.8186 | 14.1 | 99% |
| 15 | 11 | S | MB MS | | 1.9856 | 1.99 | 100% |
| 16 | 0 | N | Null | | -0.0319N | | |
| 17 | 5 | QC2 | MB1 | | 0.0108 | <0.020 | |
| 18 | 12 | S | MB 08/17/10 | | -0.0039 | | |
| 19 | 13 | S | k1008685-001 | | 3.8295 | | |
| 20 | 14 | S | k1008685-001d | | 3.6731 | | |
| 21 | 15 | S | k1008685-001ms*50 | | 1.9213 | | |
| 22 | 16 | S | k1008685-001msd*50 | | 1.9716 | | |
| 23 | 0 | B | baseline | | -0.0241 | | |
| 24 | 5 | QC2 | CCB2 | | 0.0036 | <0.020 | |
| 25 | 2 | QC1 | CCV2 | | 1.9185 | 1.92 | 96% |
| 26 | 17 | S | k1008685-002 | | 2.2455 | | |

MU 8/26/10 08/19/10

| | | | | | |
|---|---|---|---|---|---|
| 27 | 18 | S | k1008685-003 | 2.4747 | |
| 28 | 19 | S | k1008685-004 | 1.8421 | |
| 29 | 20 | S | k1008685-005 | 1.5857 | |
| 30 | 21 | S | k1008685-006 | 1.3707 | |
| 31 | 22 | S | k1008685-007 | 1.5105 | |
| 32 | 47 | S | k1008685-008*5 | 1.5065 | |
| 33 | 24 | S | k1008685-009 | 4.4457 | |
| 34 | 25 | S | k1008685-010 | 2.3477 | |
| 35 | 0 | B | BASELINE | -0.0241 | |
| 36 | 5 | QC2 | CCB-3 | 0.0107 | <0.020 |
| 37 | 2 | QC1 | CCV-3 | 1.9391 | 1.94 97% |
| 38 | 26 | S | k1008685-011 | 2.6046 | |
| 39 | 48 | S | k1008685-012*5 | 1.5842 | |
| 40 | 49 | S | k1008685-013*5 | 2.0851 | |
| 41 | 50 | S | k1008685-014*5 | 1.6607 | |
| 42 | 51 | S | k1008685-015*5 | 1.3297 | |
| 43 | 31 | S | rinse | -0.0081 | |
| 44 | 32 | S | MB 01/19/10 | -0.0011 | |
| 45 | 33 | S | k1008685-016 | 2.3338 | |
| 46 | 34 | S | k1008685-016d | 2.3609 | |
| 47 | 0 | B | Baseline | -0.0241 | |
| 48 | 5 | QC2 | CCB4 | 0.0145 | <0.020 |
| 49 | 2 | QC1 | CCV4 | 1.9720 | 1.97 99% |
| 50 | 9 | QC3 | LCS2*10 08/19/10 | 2.8060 | 14.0 98% |
| 51 | 0 | N | Null | -0.0104N | |
| 52 | 5 | QC2 | MB2 | 0.0214 | 0.021J |
| 53 | 35 | S | k1008685-016ms*50 | 2.0020 | |
| 54 | 36 | S | k1008685-016msd*50 | 2.0198 | |
| 55 | 37 | S | k1008685-017 | 4.4019 | |
| 56 | 53 | S | k1008685-018*5 | 1.1528 | |
| 57 | 54 | S | k1008685-019*5 | 1.5751 | |
| 58 | 40 | S | k1008685-020 | 2.0614 | |
| 59 | 0 | B | Baseline | -0.0241 | |
| 60 | 5 | QC2 | CCB5 | 0.0078 | <0.020 |
| 61 | 2 | QC1 | CCV5 | 1.9717 | 1.97 99% |
| 62 | 41 | S | k1008857-001 | 1.5765 | |
| 63 | 42 | S | k1008857-001d | 1.5790 | |
| 64 | 43 | S | k1008857-001ms*50 | 1.9918 | |
| 65 | 44 | S | k1008857-001msd*50 | 1.9983 | |
| 66 | 45 | S | k1008857-002 | 0.1189 | |
| 67 | 0 | B | Baseline | -0.0241 | |
| 68 | 5 | QC2 | CCB6 | 0.0087 | <0.020 |
| 69 | 2 | QC1 | CCV6 | 1.9738 | 1.97 99% |
| 70 | 1 | D | Drift | 5.0062 | |
| 71 | 0 | B | Baseline | -0.0241 | |
| 72 | 0 | B | FinalBase | -0.0241 | |

08/19/10
Hanyu

QC Limits

Channel : 2
QC 1 Unused
QC 2 Unused

MLS
8/26/10

| | |
|---|---|
| QC 3 | Unused |
| QC 4 | Unused |
| QC 5 | Unused |
| QC 6 | Unused |
| QC 7 | Unused |
| QC 8 | Unused |
| QC 9 | Unused |
| QC10 | Unused |

---

CORRECTIONS

| | | |
|---|---|---|
| Channel | : | 2 |
| Baseline | : | Yes |
| Drift | : | Yes |
| Carry over | : | Yes |
| %: | | 0.1 |

---

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

08/19/10
Hanguin

MS
8/26/10

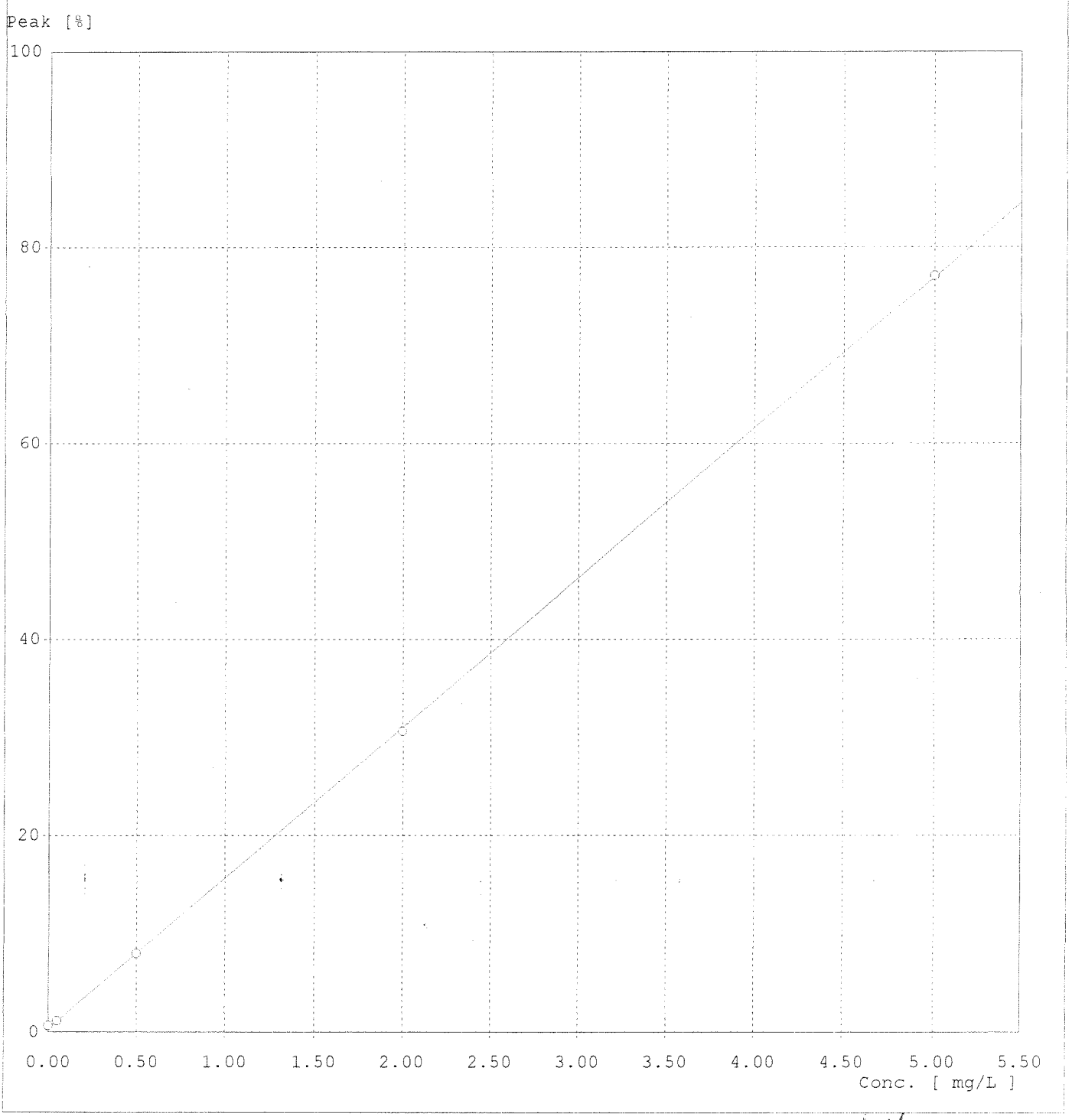
# BRAN+LUEBBE

Calibration Curve

Name of run :100819E.run
Comment :

Name of analysis :Ammonia.ANL

Channel :2
Method :Method 2
Curve fit :linear a=-3.5777E-001 b=9.9626E-005
Corr. coeff. :1.0000





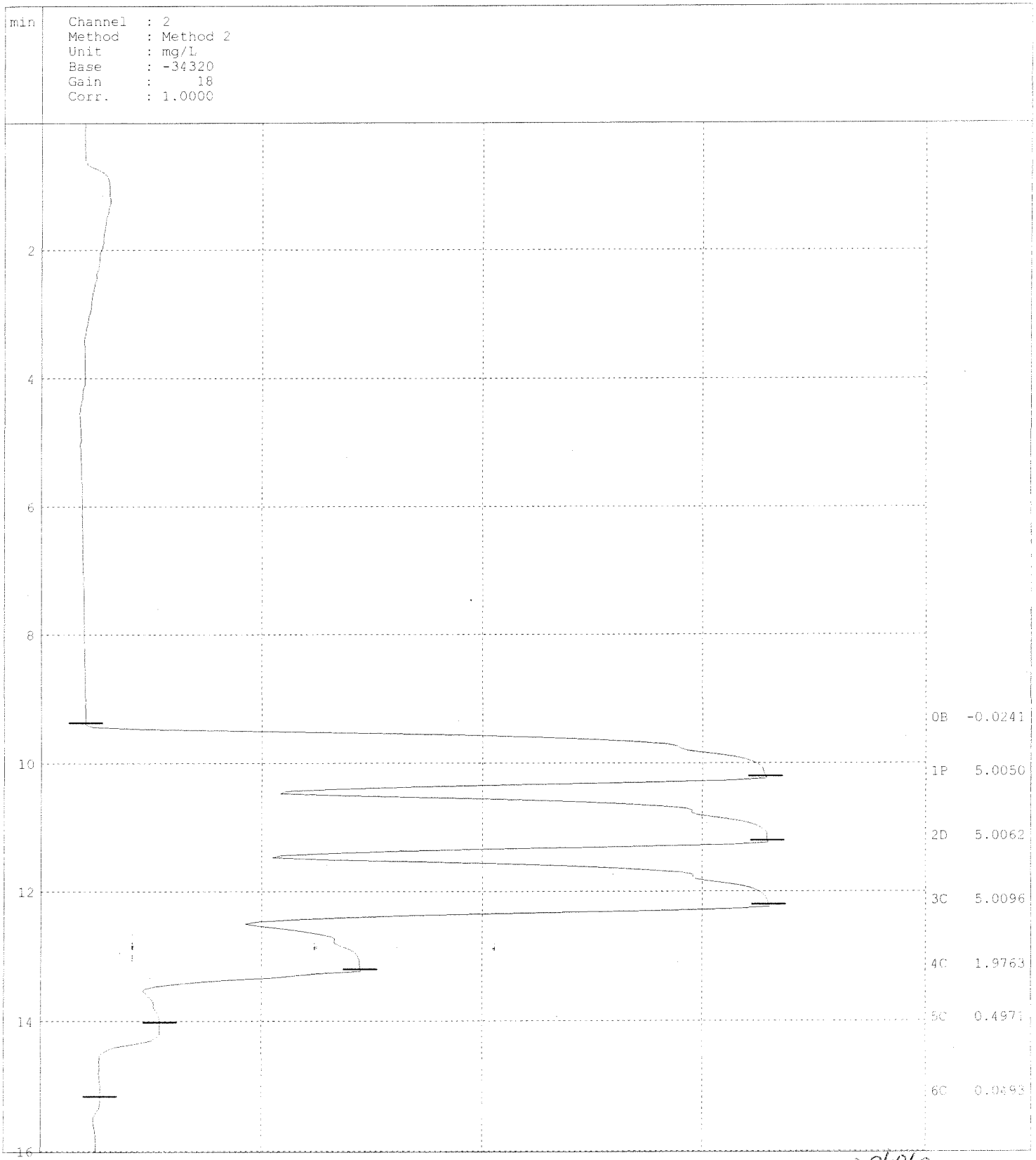

08/19/10

# BRAN+LUEBBE

Post-run chart

Name of run :100819E.RUN
Comment :

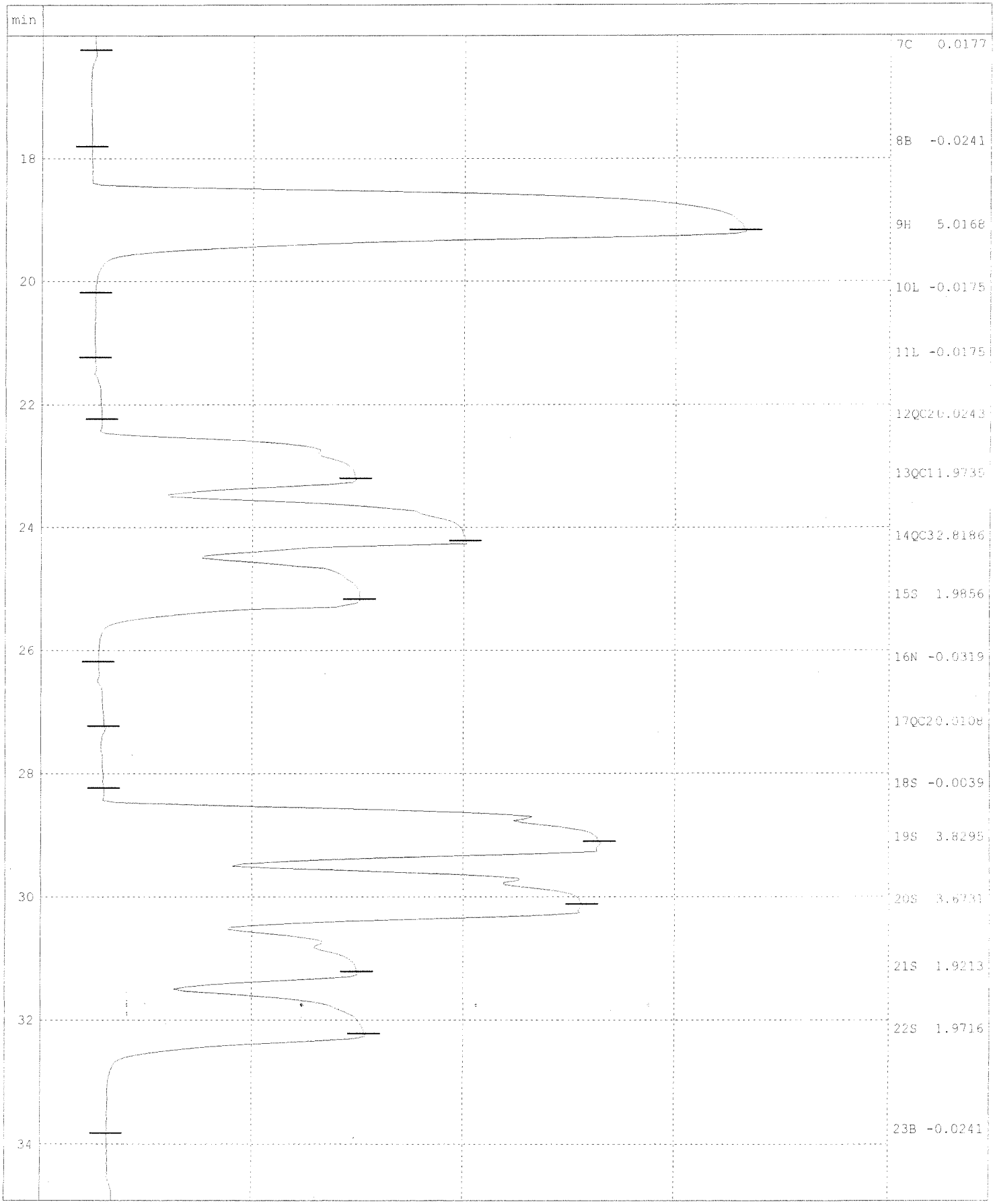
Name of analysis :Ammonia.ANL




08/19/10

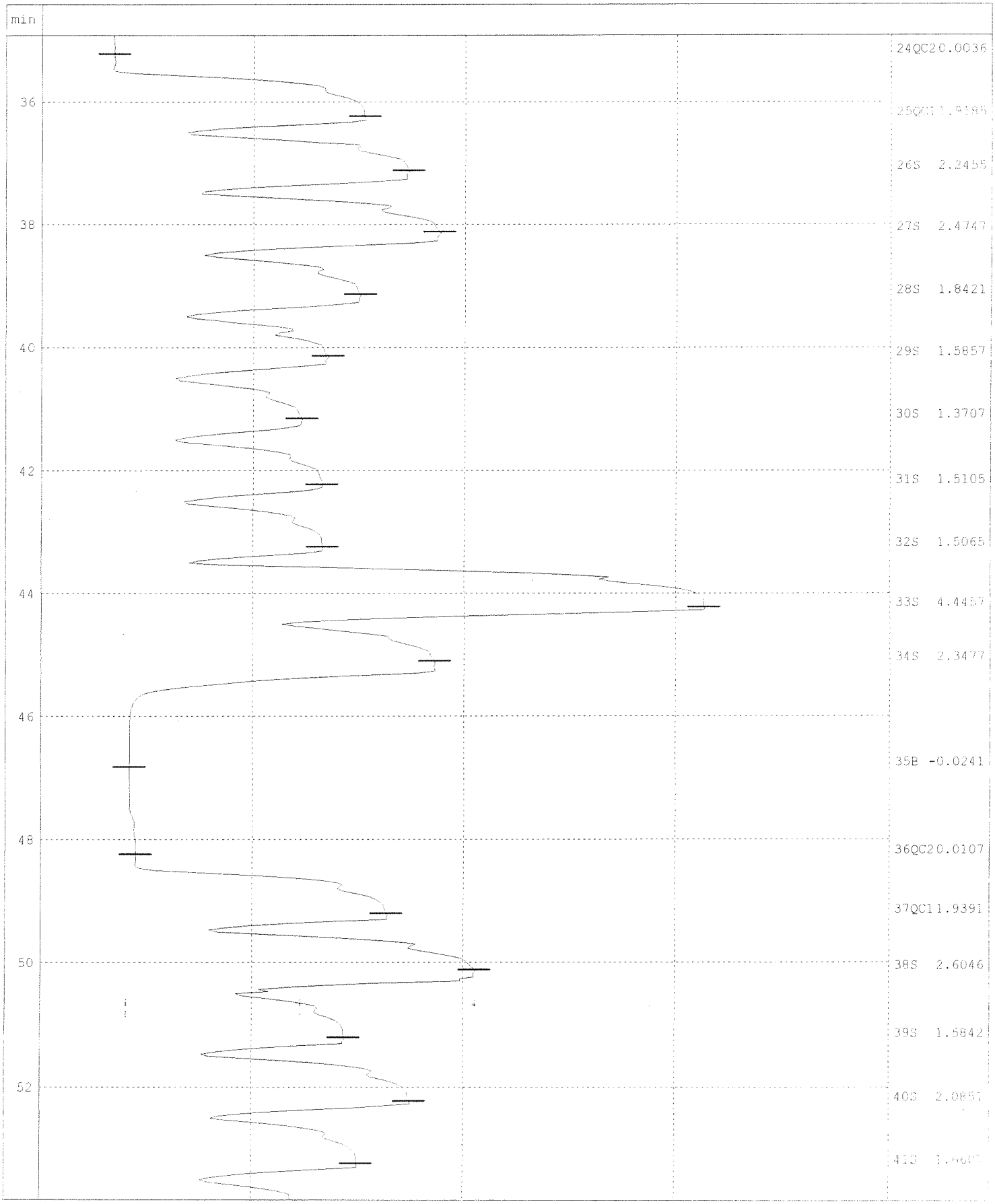
Name of run :100819E.RUN
Comment :

Name of analysis :Ammonia.ANL



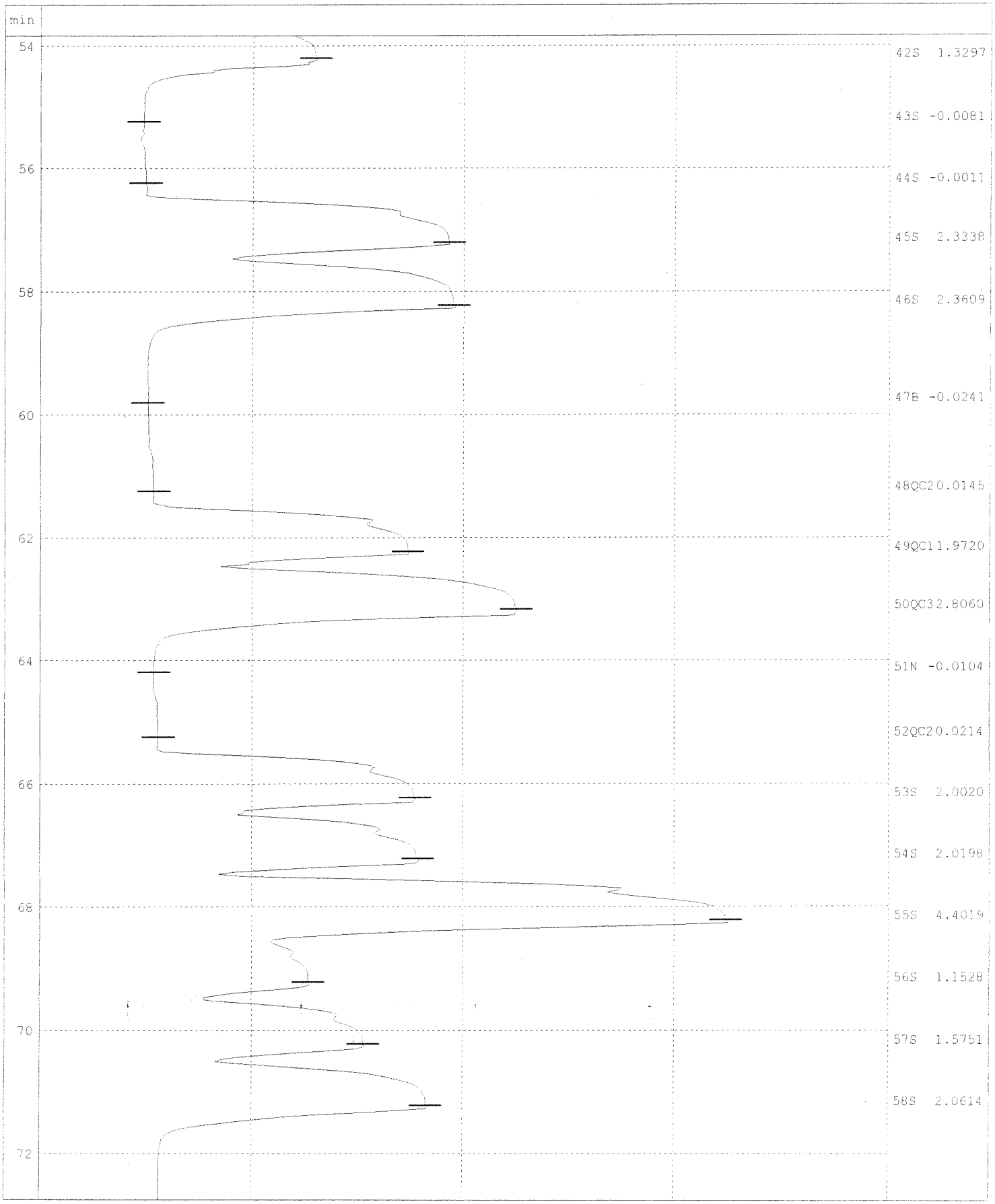
Name of run :100819E.RUN
Comment :

Name of analysis :Ammonia.ANL



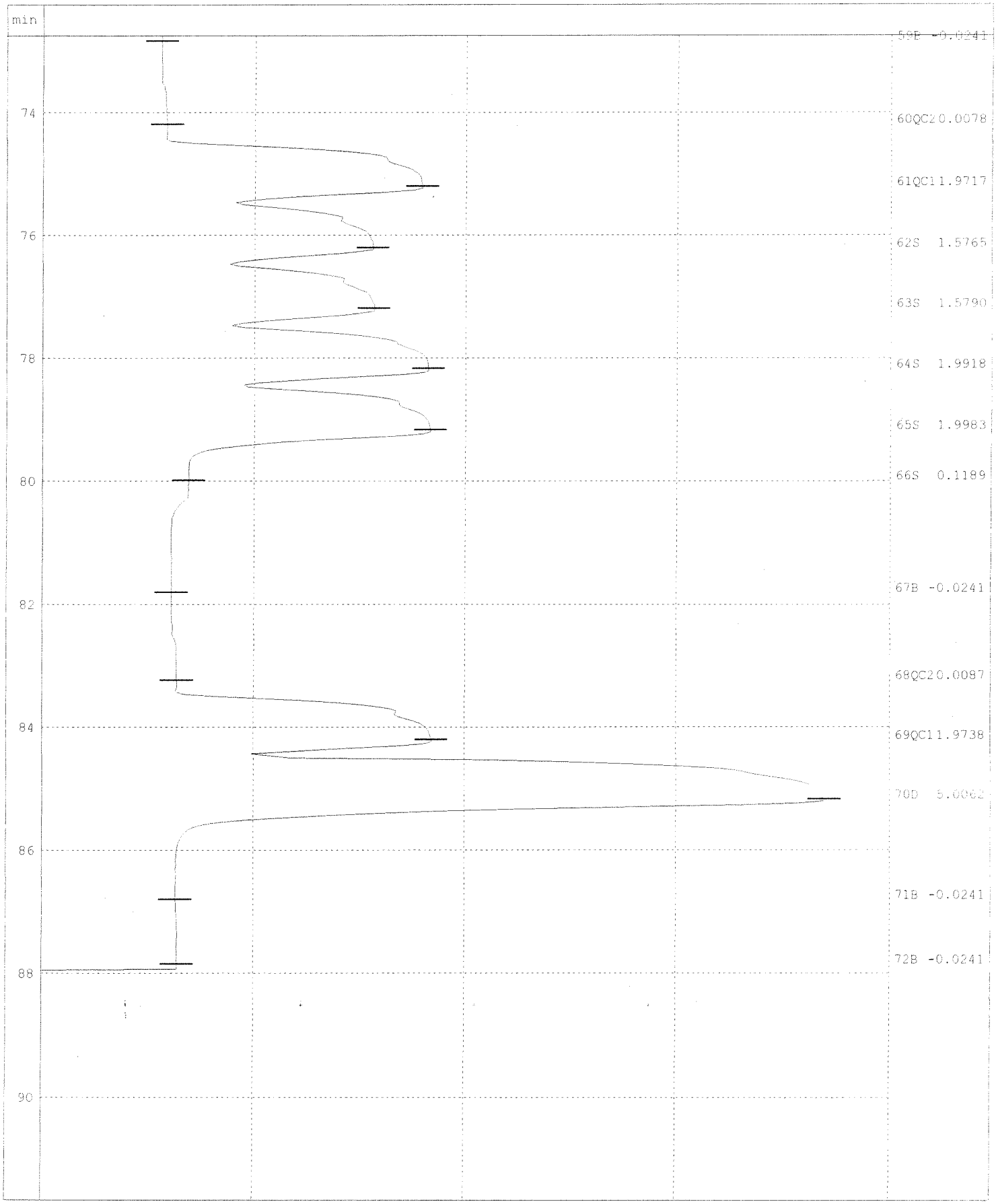
Name of run :100819E.RUN
Comment :

Name of analysis :Ammonia.ANL



Name of run :100819E.RUN
Comment :

Name of analysis :Ammonia.ANL



Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117718 **Prep Workflow**: GenExt7Day **Status**: Prepped **Prep Date**: 08/17/2010 14:00
**Team**: GenChem **Prep Method**: CAS SOP **Current Step**: Extraction
**Analyst**: T.Hanganu **Rush/NPDES**: N/A **Due Date**: 08/30/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008532-02 | Method Blank | | 10.00 g | 50.00 mL | | | |
| KQ1008532-01 | Lab Control Sample | | 10.00 g | 50.00 mL | 10 mL | 19060 | |
| K1008685-001 | LPRC02A | .02 | 10.06 g | 50.00 mL | | | |
| K1008685-001: KQ1008532-05 | Duplicate | .02 | 10.13 g | 50.00 mL | | | |
| K1008685-001: KQ1008532-03 | Matrix Spike | .02 | 10.07 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008685-001: KQ1008532-04 | Duplicate Matrix Spike | .02 | 10.01 g | 50.00 mL | 0.5 mL | 18061 | |
| K1008685-002 | LPRC03A | .02 | 10.02 g | 50.00 mL | | | |
| K1008685-003 | LPRC03B | .02 | 10.29 g | 50.00 mL | | | |
| K1008685-004 | LPRC02B | .02 | 10.01 g | 50.00 mL | | | |
| K1008685-005 | LPRC04A | .02 | 10.00 g | 50.00 mL | | | |
| K1008685-006 | LPRC04B | .02 | 10.04 g | 50.00 mL | | | |
| K1008685-007 | LPRC04C | .02 | 10.16 g | 50.00 mL | | | |
| K1008685-008 | LPRC04D | .02 | 10.14 g | 50.00 mL | | | |
| K1008685-009 | LPRC05B | .02 | 10.16 g | 50.00 mL | | | |
| K1008685-010 | LPRC05A | .02 | 10.10 g | 50.00 mL | | | |
| K1008685-011 | LPRC05A-FD | .02 | 10.37 g | 50.00 mL | | | |
| K1008685-012 | LPRC07A | .02 | 10.25 g | 50.00 mL | | | |
| K1008685-013 | LPRC07B | .02 | 10.28 g | 50.00 mL | | | |
| K1008685-014 | LPRC07D | .02 | 10.02 g | 50.00 mL | | | |
| K1008685-015 | LPRC06A | .02 | 10.03 g | 50.00 mL | | | |

20 Total Samples consisting of 15 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires |
|---|---|---|---|
| Ammonia 10,000ppm N (10 mg/mL N) NH3 | Spike | 18061 | 11/20/2010 |
| NH3 / Ophos / NO3 LCS Mixture | Spike | 19060 | 12/25/2010 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 17-AUG-10 14:00 | 17-AUG-10 16:00 | T.Hanganu | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

08/17/10
T.Hanganu

III° D. COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: K8685 K8857 Method: 350.1M

Analysis: $NH_3$

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 08/19/10 | MB | 10.00 | 50 | | | | |
| | LCS | 10.00 | | | | | |
| | K8685-16 | 10.22 | | | | | |
| | -16d | 10.09 | | | | | |
| | -16ms | 10.03 | | | | | |
| | -16msd | 10.04 | | | | | |
| | -17 | 10.01 | | | | | |
| | -18 | 10.03 | | | | | |
| | -19 | 10.03 | | | | | |
| | -20 | 10.09 | | | | | |
| | K8857-1 | 10.15 | | | | | |
| | -1d | 10.21 | | | | | |
| | -1ms | 10.31 | | | | | |
| | -1msd | 10.01 | | | | | |
| | -2 | 10.10 | | | | | |

spike = 0.5 mL x 10000 ppm (B+LNH3/1-1-R)

MS=

MSD=

LCS = 10 mL x 14.3/10 g = 14.3

X=

RPD=

STD ID # =

Comments:

| | | | |
|---|---|---|---|
| Prepared By: | | Date Prepared: 08/19/10 | Time: 9:15 |
| Analyzed By: | | Date Analyzed: 08/19/10 | |
| Reviewed By: | MLS | Date Reviewed: 8/26/10 | |

111

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: K8685

Method: 350.1M

Analysis: $NH_3$

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|---|
| 08/17/10 | MB | 10.00 | 50 | | | | |
| | LCS | 10.00 | | | | | |
| | K8685-1 | 10.06 | | | | | |
| | -1d | 10.13 | | | | | |
| | -1ms | 10.07 | | | | | |
| | -1msd | 10.01 | | | | | |
| | -2 | 10.02 | | | | | |
| | -3 | 10.29 | | | | | |
| | -4 | 10.01 | | | | | |
| | -5 | 10.00 | | | | | |
| | -6 | 10.04 | | | | | |
| | -7 | 10.16 | | | | | |
| | -8 | 10.14 | | | | | |
| | -9 | 10.16 | | | | | |
| | -10 | 10.10 | | | | | |
| | -11 | 10.37 | | | | | |
| | -12 | 10.25 | | | | | |
| | -13 | 10.28 | | | | | |
| | -14 | 10.02 | | | | | |
| | -15 | 10.03 | | | | | |

Spike = 0.5ml x 10000 ppm (B + LNH3/1 - 3 ⊙) / - A

MS=

MSD=

LCS = 10ml x 14.3 / 10.00 g = 14.3

X=

RPD=

STD ID # =

Comments:

| | | | |
|---|---|---|---|
| Prepared By: | | Date Prepared: 08/17/10 | Time: 14:00 |
| Analyzed By: | | Date Analyzed: 08/19/10 | |
| Reviewed By: | | Date Reviewed: 8/26/10 | |

⊙TH 08/17/10

Work Request # (Original) 8685, 8857

Tier: III III

Date Analyzed: 8/26/10

Analyst: C&S

Analysis: AVS / SEM

118186
215865

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:** ↳ 8685, 8857

8857-1/1d high RPD due to low sample concentration.

Final Approved by: MIS Date: 9/14/10

DQREPORT

Work Order #.:

Analysis: Acid Volatile Sulfides

Method: 821/R-91-100

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.000 | 0.046 | 0.463 | 0.925 | 1.388 | 1.850 | 2.313 | | | | Slope = | 0.6626 |
| Absorbance | 0.0002 | 0.0334 | 0.3372 | 0.6581 | 0.9662 | 1.2474 | 1.5216 | | | | Y Int. = | 0.0195 |

(R) = 0.9993

| Date Prep'd | Sample # | Dil. Factor | Absorb. @ 670 nm | Conc. from Curve (mg/L) | Actual Conc. (mg/L) | Initial Wt./Vol. (g) / (ml) | Final Vol. (ml) | A Tower mg/L (solution) | B Tower mg/L (solution) | A & B mg/L - mg/kg as rec'd | % Solid | mg/kg dry | umole/g reported | mrl | mdl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/26/2010 | ICV | 1 | 1.397 | 2.0784 | 2.0784 | 40 | 40 | 2.08 | | 2.08 | | | | | |
| 8/26/2010 | ICB | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/26/2010 | CCB1 | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/26/2010 | CCV1 | 1 | 1.246 | 1.8505 | 1.8505 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| 8/26/2010 | MB | 1 | 0.002 | -0.0272 | <0.05 | 50 | 40 | <0.05 | -0.01 | <0.05 | | | | | |
| 8/26/2010 | LCS | 1 | 1.198 | 1.7782 | 1.7782 | 10.0 | 40 | 7.11 | -0.08 | 7.11 | | | | | |
| 8/26/2010 | 8685-12 | 1 | 0.823 | 1.2122 | 1.2122 | 8.019 | 40 | 6.05 | -0.04 | 6.05 | 33.7 | 17.94 | 0.56 | 0.05 | 0.01 |
| 8/26/2010 | 8685-13 | 1 | 1.086 | 1.6094 | 1.6094 | 8.274 | 40 | 7.78 | -0.10 | 7.78 | 30.3 | 25.68 | 0.80 ✓ | 0.05 | 0.01 |
| 8/26/2010 | 8685-14 | 100 | 0.368 | 0.5265 | 52.6550 | 8.325 | 40 | 253.00 | -0.02 | 253.00 | 28.3 | 893.98 | 27.9 | 5.51 | 1.10 |
| 8/26/2010 | 8685-15 | 20 | 0.171 | 0.2282 | 4.5638 | 8.964 | 40 | 20.37 | -0.05 | 20.37 | 33.5 | 60.79 | 1.90 NR | 0.93 | 0.19 |
| 8/26/2010 | 8685-16 | 1 | 0.172 | 0.2300 | 0.2300 | 8.062 | 40 | 1.14 | -0.01 | 1.14 | 68.3 | 1.67 | 0.05 | 0.02 | 0.00 |
| 8/26/2010 | 8685-17 | 1 | 0.276 | 0.3867 | 0.3867 | 8.470 | 40 | 1.83 | -0.08 | 1.83 | 31.2 | 5.85 | 0.18 | 0.05 | 0.01 |
| 8/26/2010 | 8685-18 | 1 | 0.675 | 0.9891 | 0.9891 | 8.042 | 40 | 4.92 | 0.12 | 5.04 | 35.2 | 14.32 | 0.45 | 0.04 | 0.01 |
| 8/26/2010 | 8685-19 | 10 | 0.186 | 0.2511 | 2.5113 | 8.416 | 40 | 11.94 | -0.10 | 11.94 | 36.0 | 33.16 | 1.03 NR | 0.43 | 0.09 |
| 8/26/2010 | CCV2 | 1 | 1.243 | 1.8457 | 1.8457 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| 8/26/2010 | CCB2 | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/26/2010 | 8685-20 | 10 | 0.610 | 0.8909 | 8.9086 | 8.448 | 40 | 42.18 | -0.07 | 42.18 | 53.3 | 79.14 | 2.47 ✓ | 0.29 | 0.06 |
| 8/26/2010 | 8857-1 | 1 | 0.332 | 0.4712 | 0.4712 | 8.517 | 40 | 2.21 | -0.06 | 2.21 | 66.1 | 3.35 | 0.10 | 0.02 | 0.00 |
| 8/26/2010 | 8857-1d | 1 | 0.411 | 0.5905 | 0.5905 | 8.344 | 40 | 2.83 | -0.01 | 2.83 | 66.1 | 4.28 | 0.13 | 0.02 | 0.00 |
| 8/26/2010 | 8857-1s | 100 | 0.649 | 0.9506 | 95.0622 | 8.078 | 40 | 470.72 | 0.17 | 470.90 | 66.1 | 712.40 | 22.2 | 2.36 | 0.47 |
| 8/26/2010 | 8857-1sd | 100 | 0.645 | 0.9440 | 94.3981 | 8.288 | 40 | 455.59 | -0.01 | 455.59 | 66.1 | 689.24 | 21.5 | 2.36 | 0.47 |
| 8/26/2010 | CCV3 | 1 | 1.243 | 1.8465 | 1.8465 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| 8/26/2010 | CCB3 | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/26/2010 | CCV4 | 1 | 1.243 | 1.8466 | 1.8466 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| 8/26/2010 | CCB4 | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |

CCV =2ml*37.0mg/l/40ml= 1.85mg/L ✓ %REC = 100, 100, 100, 100, 100

LCS =2ml*37.0mg/l/10.0 g =7.40mg/L %REC = 96

ICV = 2.25ml*37.0mg/L/40ml = 2.08mg/L %REC = 100

MS = (1ml*3700mg/L/8.078g*(66.1%))/32.06 = 21.6umole/g %REC =103 8857-1/1d X=0.12 RPD=25

MSD = (1ml*3700mg/L/8.288g*(66.1%))/32.06= 21.1umole %REC =102

STD ID# S2/2-2-J CONC. = 3700mg/L

| | | | |
|---|---|---|---|
| Distilled by: | CES | Date Distilled: | 8/26/10 1400 |
| Analyzed By: | CES | Date Analyzed: | 8/26/10 2045 |
| Reviewed By: | [illegible] | Date Reviewed: | [illegible] |

Work Order #:

Analysis: Acid Volatile Sulfides

Method: 821/R-91-100

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.000 | 0.046 | 0.463 | 0.925 | 1.388 | 1.850 | 2.313 | | | | Slope = | 0.6626 |
| Absorbance | 0.000 | 0.033 | 0.337 | 0.658 | 0.966 | 1.247 | 1.522 | | | | Y Int. = | 0.0195 |

(R) = 0.9993

| Date Prep'd | Sample # | Dil. Factor | Absorb. @ 670 nm | Conc. from Curve (mg/L) | Actual Conc. (mg/L) | Initial Wt./Vol. (g) / (ml) | Final Vol. (ml) | A Tower mg/L (solution) | B Tower mg/L (solution) | A & B mg/L - mg/kg as rec'd | % Solid | mg/kg Dry | umole/g reported | mrl | mdl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/26/2010 | CCV5 | 1 | 1.242 | 1.8451 | 1.8451 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| 8/26/2010 | CCB5 | 1 | 0.000 | -0.0294 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |
| 8/26/2010 | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Distilled by: | CLS | Date Distilled: | 8/26/10 1400 |
| Analyzed By: | CLS | Date Analyzed: | 8/26/10 2045 |
| Reviewed By: | MB | Date Reviewed: | 9/14/10 |

COLUMBIA ANALYTICAL SERVICES, INC

Work Order #.: 

Method: 821/R-91-100

Analysis: Acid Volitile Sulfide

Prep Date : 8/26/2010

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc (mg/L) | 0.0000 | 0.0463 | 0.4625 | 0.9250 | 1.3875 | 1.8500 | 2.3125 | | | | | |
| Absorbance | 0.0002 | 0.0334 | 0.3372 | 0.6581 | 0.9662 | 1.2474 | 1.5216 | | | | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|
| ICV | 40 | 1 | 1.3967 | | |
| ICB | 40 | 1 | 0.0000 | | |
| CCB | 40 | 1 | 0.0000 | | |
| CCV | 40 | 1 | 1.2457 | | |
| MB | 50 | 1 | 0.0015 | 0.0107 | |
| LCS | 10.0 | 1 | 1.1978 | 0.0057 | |
| 8685-12 | 8.019 | 1 | 0.8227 | 0.0140 | 33.7 |
| 8685-13 | 8.274 | 1 | 1.0859 | 0.0053 | 30.3 |
| 8685-14 | 8.325 | 100 | 0.3684 | 0.0172 | 28.3 |
| 8685-15 | 8.964 | 20 | 0.1707 | 0.0118 | 33.5 |
| 8685-16 | 8.062 | 1 | 0.1719 | 0.0176 | 68.3 |
| 8685-17 | 8.470 | 1 | 0.2757 | 0.0080 | 31.2 |
| 8685-18 | 8.042 | 1 | 0.6749 | 0.0356 | 35.2 |
| 8685-19 | 8.416 | 10 | 0.1859 | 0.0055 | 36.0 |
| CCV2 | 40 | 1 | 1.2425 | | |
| CCB2 | 40 | 1 | 0.0000 | | |
| 8685-20 | 8.448 | 10 | 0.6098 | 0.0096 | 53.3 |
| 8857-1 | 8.517 | 1 | 0.3317 | 0.0104 | 66.1 |
| 8857-1d | 8.344 | 1 | 0.4108 | 0.0179 | 66.1 |
| 8857-1s | 8.078 | 100 | 0.6494 | 0.0428 | 66.1 |
| 8857-1sd | 8.288 | 100 | 0.6450 | 0.0175 | 66.1 |
| CCV3 | 40 | 1 | 1.2430 | | |
| CCB3 | 40 | 1 | 0.0000 | | |
| CCV4 | 40 | 1 | 1.2431 | | |
| CCB4 | 40 | 1 | 0.0000 | | |
| CCV5 | 40 | 1 | 1.2421 | | |
| CCB5 | 40 | 1 | 0.0000 | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|

Date : 8/26/2010 Time : 21:13:26

Concentration Results

118186

~~214370~~ CES 9/8/10

215865

Date: 8/26/2010 Time: 8:49:20 PM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-26-10
Ordinate mode: Single wavelength
Slit: UV/VIS: 1.00 nm
Baseline: No correction ( 0.00 0.00 )
Result Filename: TEMP.RCO
Autozero performed: 8/26/2010 8:45:25 PM
Analyst: cfs

| Wavelength(s) | | Sample ID | Ordinate | Factor | Concentration | | Sample Info |
|---|---|---|---|---|---|---|---|
| 670.0 | 0.0 | ICV | 1.3967 | 1.0000 | 2.0785 | mg/l | |
| 670.0 | 0.0 | ICB | 0.0000 | 1.0000 | -0.029 | mg/l | |
| 670.0 | 0.0 | CCB1 | 0.0000 | 1.0000 | -0.029 | mg/l | |
| 670.0 | 0.0 | CCV1 | 1.2457 | 1.0000 | 1.8506 | mg/l | |
| 670.0 | 0.0 | MB | 0.0015 | 1.0000 | -0.027 | mg/l | |
| 670.0 | 0.0 | LCS | 1.1978 | 1.0000 | 1.7782 | mg/l | |
| 670.0 | 0.0 | 8685-12 | 0.8227 | 1.0000 | 1.2122 | mg/l | |
| 670.0 | 0.0 | 8685-13 | 1.0859 | 1.0000 | 1.6094 | mg/l | |
| 670.0 | 0.0 | 8685-14 2/20 | 0.3684 | 1.0000 | 0.5265 | mg/l | |
| 670.0 | 0.0 | 8685-15 1/20 | 0.1707 | 1.0000 | 0.2281 | mg/l | |
| 670.0 | 0.0 | 8685-16 | 0.1719 | 1.0000 | 0.2300 | mg/l | |
| 670.0 | 0.0 | 8685-17 | 0.2757 | 1.0000 | 0.3866 | mg/l | |
| 670.0 | 0.0 | 8685-18 | 0.6749 | 1.0000 | 0.9890 | mg/l | |
| 670.0 | 0.0 | 8685-19 2/20 | 0.1859 | 1.0000 | 0.2511 | mg/l | |
| 670.0 | 0.0 | CCV2 | 1.2425 | 1.0000 | 1.8456 | mg/l | |
| 670.0 | 0.0 | CCB2 | -0.000 | 1.0000 | -0.029* | mg/l | |
| 670.0 | 0.0 | 8685-20 2/20 | 0.6098 | 1.0000 | 0.8908 | mg/l | |
| 670.0 | 0.0 | 8857-1 | 0.3317 | 1.0000 | 0.4711 | mg/l | |
| 670.0 | 0.0 | 8857-1d | 0.4108 | 1.0000 | 0.5905 | mg/l | |
| 670.0 | 0.0 | 8857-1s 100% | 0.6494 | 1.0000 | 0.9506 | mg/l | |
| 670.0 | 0.0 | 8857-1sd 100% | 0.6450 | 1.0000 | 0.9439 | mg/l | |
| 670.0 | 0.0 | MBb | 0.0107 | 1.0000 | -0.013 | mg/l | |
| 670.0 | 0.0 | LCSb | 0.0057 | 1.0000 | -0.020 | mg/l | |
| 670.0 | 0.0 | 8685-12b | 0.0140 | 1.0000 | -0.008 | mg/l | |
| 670.0 | 0.0 | 8685-13b | 0.0053 | 1.0000 | -0.021 | mg/l | |
| 670.0 | 0.0 | 8685-14b | 0.0172 | 1.0000 | -0.003 | mg/l | |
| 670.0 | 0.0 | CCV3 | 1.2430 | 1.0000 | 1.8465 | mg/l | |
| 670.0 | 0.0 | CCB3 | 0.0000 | 1.0000 | -0.029 | mg/l | |
| 670.0 | 0.0 | 8685-15b | 0.0118 | 1.0000 | -0.011 | mg/l | |
| 670.0 | 0.0 | 8685-16b | 0.0176 | 1.0000 | -0.003 | mg/l | |
| 670.0 | 0.0 | 8685-17b | 0.0080 | 1.0000 | -0.017 | mg/l | |
| 670.0 | 0.0 | 8685-18b | 0.0356 | 1.0000 | 0.0243 | mg/l | |
| 670.0 | 0.0 | 8685-19b | 0.0055 | 1.0000 | -0.021 | mg/l | |
| 670.0 | 0.0 | 8685-20b | 0.0096 | 1.0000 | -0.015 | mg/l | |
| 670.0 | 0.0 | 8857-1b | 0.0104 | 1.0000 | -0.013 | mg/l | |
| 670.0 | 0.0 | 8857-1bd | 0.0179 | 1.0000 | -0.002 | mg/l | |
| 670.0 | 0.0 | 8857-1bs | 0.0428 | 1.0000 | 0.0351 | mg/l | |
| 670.0 | 0.0 | 8857-1sd | 0.0175 | 1.0000 | -0.003 | mg/l | |
| 670.0 | 0.0 | CCV4 | 1.2431 | 1.0000 | 1.8466 | mg/l | |
| 670.0 | 0.0 | CCB4 | 0.0000 | 1.0000 | -0.029 | mg/l | |
| 670.0 | 0.0 | 8857-2b | 0.0088 | 1.0000 | -0.016 | mg/l | |
| 670.0 | 0.0 | CCV5 | 1.2421 | 1.0000 | 1.8451 | mg/l | |
| 670.0 | 0.0 | CCB5 | -0.000 | 1.0000 | -0.030* | mg/l | |
| ~~670.0~~ | ~~0.0~~ | | ~~-0.000~~ | ~~1.0000~~ | ~~-0.030*~~ | ~~mg/l~~ | |
| 670.0 | 0.0 | | -0.000 | 1.0000 | -0.030* | mg/l | Extra Spots |

CALIBRATION

Date: 8/26/2010 Time: 8:45:25 PM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-26-10
Ordinate mode: Single wavelength
Baseline: No correction ( 0.00 0.00 )
Analyst: cfs

CFS 8/26/10

| Wavelength(s) | | Sample ID | Concentration | | Ord. value | Comment |
|---|---|---|---|---|---|---|
| 670.0 | 0.0 | 8-26-10.A01 | 0.0000 | mg/l | 0.0002 | |
| 670.0 | 0.0 | 8-26-10.A02 | 0.0463 | mg/l | 0.0334 | |
| 670.0 | 0.0 | 8-26-10.A03 | 0.4625 | mg/l | 0.3372 | |
| 670.0 | 0.0 | 8-26-10.A04 | 0.9250 | mg/l | 0.6581 | |
| 670.0 | 0.0 | 8-26-10.A05 | 1.3875 | mg/l | 0.9662 | |
| 670.0 | 0.0 | 8-26-10.A06 | 1.8500 | mg/l | 1.2474 | |
| 670.0 | 0.0 | 8-26-10.A07 | 2.3125 | mg/l | 1.5216 | |

Equation: y = 1.953650e-02 + 6.625955e-01 * x

Residual error: 0.024911
Correlation coefficient: 0.999265

Work Order #.:

Analysis: Acid Volatile Sulfides

Method: 821/R-91-100

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.000 | 0.046 | 0.463 | 0.925 | 1.388 | 1.850 | 2.313 | | | | (R) = | 0.9991 |
| Absorbance | 0.0000 | 0.0338 | 0.3404 | 0.6607 | 0.9660 | 1.2413 | 1.5111 | | | | Slope = | 0.6582 |
| | | | | | | | | | | | Y Int. = | 0.0224 |

| Date Prep'd | Sample # | Dil. Factor | Absorb. @ 670 nm | Conc. from Curve (mg/L) | Actual Conc. (mg/L) | Initial Wt./Vol. (g) / (ml) | Final Vol. (ml) | A Tower mg/L (solution) | B Tower mg/L (solution) | A & B mg/L - mg/kg as rec'd | % Solid | mg/kg dry | umole/g reported | mrl | mdl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CCV1 | 1 | 1.238 | 1.8473 | 1.8473 | 40 | 40 | 1.85 | | 1.85 | | | | | |
| | CCB | 1 | 0.000 | -0.0340 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| | 8857-2 | 1 | 0.023 | 0.0013 | 0.0013 | 8 | 40 | 0.01 | -0.10 | 0.0 | 72.9 | 0.01 | <0.004 | 0.02 | 0.004 |
| | 8685-15 | 4 | 0.829 | 1.2254 | 4.9014 | 9 | 40 | 21.87 | -0.07 | 21.87 | 33.5 | 65.29 | 2.04 | 0.19 | 0.04 |
| | 8685-19 | 4 | 0.511 | 0.7428 | 2.9714 | 8 | 40 | 14.12 | -0.12 | 14.12 | 36.0 | 39.23 | 1.22 | 0.17 | 0.03 |
| | CCV2 | 1 | 1.235 | 1.8419 | 1.8419 | 40 | 40 | 1.84 | | 1.84 | | | | | |
| | CCB2 | 1 | 0.000 | -0.0340 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |
| | | | | | | | 40 | | | | | | | | |

CCV =2ml*37.0mg/l/40ml= 1.85mg/L %REC = 100, 99

STD ID# S2/2-2-J CONC. = 3700mg/L

| | | | |
|---|---|---|---|
| Distilled by: | CES | Date Distilled: | 8/26/10 1400 |
| Analyzed By: | CES | Date Analyzed: | 8/26/10 2154 |
| Reviewed By: | | Date Reviewed: | |

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: 821/R-91-100

Analysis: Acid Volitile Sulfide

Prep Date : _____

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.0000 | 0.0463 | 0.4625 | 0.9250 | 1.3875 | 1.8500 | 2.3125 | | | | | |
| Absorbance | 0.0000 | 0.0338 | 0.3404 | 0.6607 | 0.9660 | 1.2413 | 1.5111 | | | | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|
| CCV | 40 | 1 | 1.2383 | | |
| CCB | 40 | 1 | 0.0000 | | |
| 8857-2 | 8.25 | 1 | 0.0232 | 0.0088 | 72.9 |
| 8685-15 | 8.964 | 4 | 0.8289 | 0.0118 | 33.5 |
| 8685-19 | 8.416 | 4 | 0.5113 | 0.0055 | 36.0 |
| CCV2 | 40 | 1 | 1.2347 | | |
| CCB2 | 40 | 1 | 0.0000 | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|

Concentration Results

Date: 8/26/2010 Time: 10:00:07 PM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-26-10b
Ordinate mode: Single wavelength
Slit: UV/VIS: 1.00 nm
Baseline: No correction ( 0.00 0.00 )
Result Filename: TEMP.RCO
Autozero performed: 8/26/2010 9:54:03 PM
Analyst: cfs

| Wavelength(s) | | Sample ID | Ordinate | Factor | Concentration | | Sample Info |
|---|---|---|---|---|---|---|---|
| 670.0 | 0.0 | CCV1 | 1.2383 | 1.0000 | 1.8474 | mg/l | |
| 670.0 | 0.0 | CCB1 | -0.000 | 1.0000 | -0.034* | mg/l | |
| 670.0 | 0.0 | 8857-2 | 0.0232 | 1.0000 | 0.0013 | mg/l | |
| 670.0 | 0.0 | 8685-15 5/20 | 0.8289 | 1.0000 | 1.2254 | mg/l | |
| 670.0 | 0.0 | 8685-19 5/20 | 0.5113 | 1.0000 | 0.7428 | mg/l | |
| 670.0 | 0.0 | CCV2 | 1.2347 | 1.0000 | 1.8419 | mg/l | |
| 670.0 | 0.0 | CCB2 | -0.000 | 1.0000 | -0.034* | mg/l | |

CALIBRATION

Date: 8/26/2010 Time: 9:54:03 PM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-26-10b
Ordinate mode: Single wavelength
Baseline: No correction ( 0.00 0.00 )
Analyst: cfs

CES 8/26/10

| Wavelength(s) | | Sample ID | Concentration | | Ord. value | Comment |
|---|---|---|---|---|---|---|
| 670.0 | 0.0 | 8-26-10b.A01 | 0.0000 | mg/l | -0.000 | |
| 670.0 | 0.0 | 8-26-10b.A02 | 0.0463 | mg/l | 0.0338 | |
| 670.0 | 0.0 | 8-26-10b.A03 | 0.4625 | mg/l | 0.3404 | |
| 670.0 | 0.0 | 8-26-10b.A04 | 0.9250 | mg/l | 0.6607 | |
| 670.0 | 0.0 | 8-26-10b.A05 | 1.3875 | mg/l | 0.9660 | |
| 670.0 | 0.0 | 8-26-10b.A06 | 1.8500 | mg/l | 1.2413 | |
| 670.0 | 0.0 | 8-26-10b.A07 | 2.3125 | mg/l | 1.5111 | |

Equation: y = 2.234575e-02 + 6.582161e-01 * x

Residual error: 0.028112
Correlation coefficient: 0.999051

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: 821/R-91-100

Analysis: AVS/SEM

| Date Prepared | Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | AVS - Final Volume (mL) | mLs 50% HCl added | SEM - Final Volume (mL) | Sample description: |
|---|---|---|---|---|---|---|
| 8/26/10 | MB | 50 | 50 40 (1) | 10 | | |
| | LCS | 10.0 | | | | |
| | 8685 - 12 | 8.019 | | | | |
| | 13 | 8.274 | | | | |
| | 14 | 8.325 | | | | |
| | 15 | 8.964 | | | | |
| | 16 | 8.062 | | | | |
| | 17 | 8.470 | | | | |
| | 18 | 8.042 | | | | |
| | 19 | 8.416 | | | | |
| | 20 | 8.448 | | | | |
| | 8857- 1 | 8.517 | | | | |
| | 1d | 8.344 | | | | |
| | 1s | 8.078 | | | | |
| | 1sd | 8.288 | | | | |
| | 2 | 8.250 | | | | |

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup.= % REC =

(1) CES 9/8/10 T.E.

x =

STD ID# = RPD =

| | | | |
|---|---|---|---|
| Prepared By: | CES | Date Prepared: | 8/26/10 |
| Analyzes By: | | Date Analyzed: | |
| Reviewed By: | | Date Reviewed: | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118186
**Team**: GenChem
**Analyst**: CSETHE

**Prep Workflow**: Gen DistAVS/SEM
**Prep Method**: EPA 821/R-91-100
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/26/2010 14:00
**Due Date**: 08/30/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008879-01 | Method Blank | | 50 mL | 40 mL | | | |
| KQ1008879-02 | Lab Control Sample | | 10.0 g | 40 mL | | | |
| K1008685-012 | LPRC07A | .01 | 8.019 g | 40 mL | | | |
| K1008685-013 | LPRC07B | .01 | 8.274 g | 40 mL | | | |
| K1008685-014 | LPRC07D | .01 | 8.325 g | 40 mL | | | |
| K1008685-015 | LPRC06A | .01 | 8.964 g | 40 mL | | | |
| K1008685-016 | LPRC15A | .01 | 8.062 g | 40 mL | | | |
| K1008685-017 | LPRC08A | .01 | 8.470 g | 40 mL | | | |
| K1008685-018 | LPRC09A | .01 | 8.042 g | 40 mL | | | |
| K1008685-019 | LPRC10A | .01 | 8.416 g | 40 mL | | | |
| K1008685-020 | LPRC12A | .01 | 8.448 g | 40 mL | | | |
| K1008857-001 | LPRC07C | .05 | 8.517 g | 40 mL | | | |
| K1008857-001: KQ1008879-05 | Duplicate | .05 | 8.344 g | 40 mL | | | |
| K1008857-001: KQ1008879-03 | Matrix Spike | .05 | 8.078 g | 40 mL | | | |
| K1008857-001: KQ1008879-04 | Duplicate Matrix Spike | .05 | 8.288 g | 40 mL | | | |
| K1008857-002 | LPRC13A | .05 | 8.250 g | 40 mL | | | |

16 Total Samples consisting of 11 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 26-AUG-10 14:00 | 26-AUG-10 19:00 | CSETHE | | N | |

**Comments**

**Review**

Reviewed by: _____ Date: _____

Work Request # Original KDO 8653, 8685, 8857, 8971

Tier: II I V V

Date Analyzed: 8/27/10

Analyst: D Davidson

Analysis: CN- Total Soils

214641

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

Final Approved by: [signature] Date: 9/31/10

DQREPORT

# Analytical Results Summary

**nstrument Name:** K-FIA-03 **Analyst:** DDAVIDSON **Analysis Lot:** 214641 **Method/Testcode:** 9012A/CN Tot

| b Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 008653-001 | Cyanide, Total | N/A | | Sludge, Solid | 11.34 µg/L | 2.523 g | 0.94 mg/Kg U | 1 | 0.29 | 0.94 | | | 8/26/10 10:00:00 | N | II |
| 008653-002 | Cyanide, Total | N/A | | Sludge, Solid | -2.12 µg/L | 2.515 g | 0.81 mg/Kg U | 1 | 0.25 | 0.81 | | | 8/26/10 10:00:00 | N | II |
| 008685-016 | Cyanide, Total | N/A | | Sediment | -2.40 µg/L | 2.700 g | 0.27 mg/Kg U | 1 | 0.09 | 0.27 | | | 8/26/10 10:00:00 | N | V |
| 008685-017 | Cyanide, Total | N/A | | Sediment | 0.24 µg/L | 2.573 g | 0.62 mg/Kg U | 1 | 0.19 | 0.62 | | | 8/26/10 10:00:00 | N | V |
| 008685-018 | Cyanide, Total | N/A | | Sediment | 1.76 µg/L | 2.512 g | 0.57 mg/Kg U | 1 | 0.17 | 0.57 | | | 8/26/10 10:00:00 | N | V |
| 008685-019 | Cyanide, Total | N/A | | Sediment | 1.59 µg/L | 2.518 g | 0.55 mg/Kg U | 1 | 0.17 | 0.55 | | | 8/26/10 10:00:00 | N | V |
| 008685-020 | Cyanide, Total | N/A | | Sediment | 1.06 µg/L | 2.685 g | 0.35 mg/Kg U | 1 | 0.11 | 0.35 | | | 8/26/10 10:00:00 | N | V |
| 008857-001 | Cyanide, Total | N/A | | Sediment | -2.29 µg/L | 2.942 g | 0.26 mg/Kg U | 1 | 0.08 | 0.26 | | | 8/26/10 10:00:00 | N | V |
| 008857-002 | Cyanide, Total | N/A | | Sediment | 6.20 µg/L | 2.743 g | 0.25 mg/Kg U | 1 | 0.08 | 0.25 | | | 8/26/10 10:00:00 | N | V |
| 008971-003 | Cyanide, Total | N/A | | Sludge, Solid | 0.95 µg/L | 2.395 g | 0.68 mg/Kg U | 1 | 0.21 | 0.68 | | | 8/26/10 10:00:00 | N | V |
| )1008750-01 | Cyanide, Total | LCS | | Sediment | 197.00 µg/L | 1.060 g | 23.2 mg/Kg | 5 | 0.8 | 2.4 | 93 | | 8/26/10 10:00:00 | N | V |
| )1008750-02 | Cyanide, Total | MB | | Sediment | -3.00 µg/L | 0 g | -2.995 mg/Kg | 1 | | | | | 8/26/10 10:00:00 | N | V |
| )1008750-03 | Cyanide, Total | DUP | K1008685-016 | Sediment | -3.20 µg/L | 2.728 g | 0.27 mg/Kg U | 1 | 0.09 | 0.27 | | NC | 8/26/10 10:00:00 | N | V |
| )1008750-04 | Cyanide, Total | MS | K1008685-016 | Sediment | 123.90 µg/L | 2.674 g | 1.70 mg/Kg | 1 | 0.09 | 0.27 | 62 | | 8/26/10 10:00:00 | N | V |
| )1008750-05 | Cyanide, Total | DMS | K1008685-016 | Sediment | 35.18 µg/L | 2.814 g | 0.458 mg/Kg | 1 | 0.08 | 0.26 | 18 | 115* | 8/26/10 10:00:00 | N | V |
| )1008750-06 | Cyanide, Total | LCS | | Sediment | 202.00 µg/L | 1.013 g | 24.9 mg/Kg | 5 | 0.8 | 2.5 | 95 | | 8/26/10 10:00:00 | N | V |
| )1008963-01 | Cyanide, Total | CCB | | Sediment | 0.00 µg/L | 2.5 g | 0.20 mg/Kg U | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-02 | Cyanide, Total | CCB | | Sediment | 0.00 µg/L | 2.5 g | 0.20 mg/Kg U | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-03 | Cyanide, Total | CCB | | Sediment | 0.00 µg/L | 2.5 g | 0.20 mg/Kg U | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-04 | Cyanide, Total | CCB | | Sediment | 0.00 µg/L | 2.5 g | 0.20 mg/Kg U | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-05 | Cyanide, Total | CCB | | Sediment | 0.00 µg/L | 2.5 g | 0.20 mg/Kg U | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-06 | Cyanide, Total | CCV | | Sediment | 106.70 µg/L | 2.5 g | 106.7 mg/Kg | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-07 | Cyanide, Total | CCV | | Sediment | 105.80 µg/L | 2.5 g | 105.8 mg/Kg | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-08 | Cyanide, Total | CCV | | Sediment | 106.50 µg/L | 2.5 g | 106.5 mg/Kg | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-09 | Cyanide, Total | CCV | | Sediment | 106.80 µg/L | 2.5 g | 106.8 mg/Kg | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |
| )1008963-10 | Cyanide, Total | CCV | | Sediment | 107.40 µg/L | 2.5 g | 107.4 mg/Kg | 1 | 0.06 | 0.20 | | | 8/26/10 10:00:00 | N | V |

125

ıdicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Author: Omnion User

Date : 8/27/2010

Original Run Filename: OM_8-27-2010_01-42-56PM.OMN created 8/27/2010 1:42:56 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_8-27-2010_01-42-56PM.OMN last modified 8/27/2010 2:33:34 PM
Current Run Author's Signature: [Omnion User]
Description: Default new Run

| Sample | Rep. | Channel 2 Cyanide (ug/L) |
|---|---|---|
| Cal Std A | 1 | 300.0 |
| Cal Std B | 1 | 200.0 |
| Cal Std C | 1 | 150.0 |
| Cal Std D | 1 | 100.0 |
| Cal Std E | 1 | 50.00 |
| Cal Std F | 1 | 20.00 |
| Cal Std G | 1 | 10.00 |
| | 2 | 10.00 |
| Blank | 1 | 0.000 |
| | 2 | 0.000 |
| ICV | 1 | 154.8 |
| Calibration: | | Table/Fig. 1 |
| ICB | 1 | -3.582 |
| CCV | 1 | 106.7 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.396 |
| Known Conc: | | 0.000 |
| MB SOIL | 1 | -2.995 |
| LCS1 SOIL X5 | 1 | 197.0 |
| LCS2 SOIL X5 | 1 | 202.0 |
| 0.15 X2 | 1 | 145.3 |
| 0.05 | 1 | 22.25 |
| 8653-1 | 1 | 11.34 |
| 8653-2 | 1 | -2.115 |
| 8971-3 | 1 | 0.9481 |
| 8685-16 | 1 | -2.396 |
| 8685-16D | 1 | -3.202 |
| CCV | 1 | 105.8 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.209 |
| Known Conc: | | 0.000 |
| 8685-16MS | 1 | 123.9 |
| 8685-16SD | 1 | 35.18 |
| 8685-17 | 1 | 0.2433 |
| 8685-18 | 1 | 1.758 |
| 8685-19 | 1 | 1.593 |
| 8685-20 | 1 | 1.060 |
| 8857-1 | 1 | -2.288 |
| 8857-2 | 1 | 6.196 |
| MB 8/27 85/20 | 1 | -3.622 |
| LCS | 1 | 137.2 |
| CCV | 1 | 106.5 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.377 |
| Known Conc: | | 0.000 |
| 0.15 X2 | 1 | 145.2 |
| 0.05 | 1 | 106.0 |
| 8964-1 85/20 | 1 | -1.312 |
| 9039-1 85/20 | 1 | -0.05021 |
| 9039-2 85/20 | 1 | -0.4674 |
| 9039-3 85/20 | 1 | 0.1760 |
| 9039-4 85/20 | 1 | -0.8665 |
| 8945-1 | 1 | -3.065 |
| 8945-1 D | 1 | -3.534 |
| 8945-1MS | 1 | 196.4 |
| CCV | 1 | 106.8 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.503 |

103.2%

(1)

(2)

(3)

(4)

Prep # 117996
Run 214641

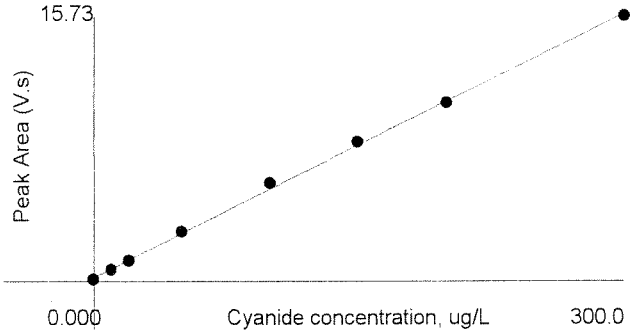
DDavidson
8/27/10

| | | |
|---|---|---|
| Known Conc: | | 0.000 |
| 8945-1SD | 1 | 214.6 |
| 0.05 STD REDO 8/26 | 1 | 22.25 |
| 8917-4 X50000 | 1 | 305.4 |
| RINSE | 1 | -3.546 |

Table 1: Cyanide

| | Known Conc. (ug/L) | Rep | Peak Area (V.s) | Peak Height (V) | % RSD | % Residual | Det. Conc. (ug/L) | Detection Date | Detection Time |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 300.0 | 1 | 15.73 | 1.003 | 0.0 | 1.0 | 296.8 | 8/27/2010 | 1:43:47 PM |
| 2 | 200.0 | 1 | 10.57 | 0.6758 | 0.0 | 1.0 | 197.9 | 8/27/2010 | 1:44:38 PM |
| 3 | 150.0 | 1 | 8.241 | 0.5297 | 0.0 | -2.3 | 153.4 | 8/27/2010 | 1:45:30 PM |
| 4 | 100.0 | 1 | 5.818 | 0.3753 | 0.0 | -6.8 | 107.0 | 8/27/2010 | 1:46:22 PM |
| 5 | 50.00 | 1 | 2.949 | 0.1914 | 0.0 | -3.8 | 52.11 | 8/27/2010 | 1:47:15 PM |
| 6 | 20.00 | 1 | 1.244 | 0.08053 | 0.0 | 2.4 | 19.48 | 8/27/2010 | 1:48:08 PM |
| 7 | 10.00 | 1 | 0.6869 | 0.04564 | 1.1 | 8.8 | 8.811 | 8/27/2010 | 1:49:03 PM |
| 8 | 10.00 | 2 | 0.6973 | 0.04562 | 1.1 | 7.4 | 9.011 | 8/27/2010 | 1:49:57 PM |
| 9 | 0.000 | 1 | 0.1003 | 0.007166 | | | -2.417 | 8/27/2010 | 1:50:52 PM |
| 10 | 0.000 | 2 | 0.1142 | 0.007192 | | | -2.150 | 8/27/2010 | 1:51:47 PM |

Figure 1: Cyanide




Area = 0.05219 * Conc + 0.2309
Conc = 19.14 * Area - 4.337
Correlation Coefficient (r) = 0.99951

No Weighting

Author: Omnion User

Date : 8/27/2010

Original Run Filename: OM_8-27-2010_03-36-50PM.OMN created 8/27/2010 3:36:50 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_8-27-2010_03-36-50PM.OMN last modified 8/27/2010 4:09:54 PM
Current Run Author's Signature: [Omnion User]
Description: Default new Run

| Sample | Rep. | Channel 2 Cyanide (ug/L) |
|---|---|---|
| ICV | 1 | 157.6 |
| ICB | 1 | -3.550 |
| CCV | 1 | 107.4 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.181 |
| Known Conc: | | 0.000 |
| 8917-4 X~~100000~~ | 1 | 158.0 |
| RINSE 50,000 | 1 | -3.451 |
| 8917-8 X~~100000~~ | 1 | 276.4 |
| RINSE 50,000 | 1 | -3.264 |
| 8917-12 X~~100000~~ | 1 | 462.6 |
| RINSE 50,000 | 1 | -3.303 |
| 8917-16 X~~100000~~ | 1 | -3.787 |
| RINSE 50,000 | 1 | -3.897 |
| 8917-20X~~100000~~ | 1 | -3.632 |
| RINSE 50000 | 1 | -3.879 |
| CCV | 1 | 107.4 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.336 |
| Known Conc: | | 0.000 |
| 8917-24 X~~100000~~ | 1 | -3.797 |
| RINSE 50000 | 1 | -3.713 |
| 8917-29 X~~100000~~ | 1 | -3.890 |
| RINSE 50000 | 1 | -3.895 |
| 8917-12 X~~200000~~ | 1 | 262.0 |
| RINSE 100000 | 1 | -3.742 |
| 8917-16 X~~1000~~ | 1 | -1.977 |
| RINSE 500 | 1 | -3.584 |
| 8917-20 X~~1000~~ | 1 | -2.130 |
| RINSE 500 | 1 | -3.946 |
| CCV | 1 | 106.7 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.375 |
| Known Conc: | | 0.000 |
| 8917-24 X~~1000~~ | 1 | -2.439 |
| RINSE 500 | 1 | -3.445 |
| 8917-29 X~~1000~~ | 1 | -2.852 |
| RINSE 500 | 1 | -4.023 |
| 8917-16 X~~10~~ 5 | 1 | 358.6 |
| 8917-20 X~~10~~ 5 | 1 | 166.1 |
| 8917-24 X~~10~~ 5 | 1 | 150.6 |
| 8917-29 X~~10~~ 5 | 1 | 73.43 |

B

Author: Omnion User

Date : 8/27/2010

Original Run Filename: OM_8-27-2010_04-18-16PM.OMN created 8/27/2010 4:18:16 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_8-27-2010_04-18-16PM.OMN last modified 8/27/2010 4:26:05 PM
Current Run Author's Signature: [Omnion User]
Description: Default new Run

| Sample | Rep. | Channel 2 Cyanide (ug/L) |
|---|---|---|
| CCV | 1 | 110.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.486 |
| Known Conc: | | 0.000 |
| 8917-16 X~~50~~ | 1 | 83.19 |
| CCV 25 | 1 | 108.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -2.302 |
| Known Conc: | | 0.000 |

Method: EPA 335.1 / 335.4

9012 / SM 4500-CN I&E / SM 4500-CN C&E

Analysis: Analysis: Total $CN^-$ $CN^-$ WAD Chlor. $CN^-$

Method modified using the Lachat Autoanalyzer for the colorimetric analysis.

| Date Prepared | Lab Sample ID | Sample Dilution | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | ug/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. | Reported mg/Kg( Dry) |
|---|---|---|---|---|---|---|---|---|---|
| 8/26/2010 | MB | 1 | | 25 | | ~~#DIV/0!~~ | | | |
| | LCS | 5 | 1.060 | 25 | 197 | 23.231 | | | |
| | 0.15 | 2 | 50 ml | 25 | 145.3 | 0.145 | | | |
| | 0.05 | 1 | 50 ml | 25 | 22.25 | 0.011 | | | |
| | LCS 2 | 5 | 1.013 | 25 | 202 | 24.926 | | | |

Comments: All standards and total cyanides distilled with sulfamic acid.

LCS: Inorganic Ventures Lot #: D522 ID # CN/5-93-U T.V. =26.6 mg/kg LCS1 % REC: 87% LCS2 = 94%

0.15 Distilled = (0.75 mL x 10 ppm KCN) / 50 mL %REC= 97% Qualitative test for sulfides:X

* 0.05 Distilled= (0.25 mL x 10 ppm KCN) / 50 mL %REC= 22% Qualitative test for oxidants:X

10 ppm KCN ID #: CN/5-26-ee

ms= ((0.50 mL x 10 ppm KCN) / % REC: =

x = RPD =

msd= ((0.50 mL x 10 ppm KCN) / % REC: =

* 0.05 Std - Suspect leaked -
Note that 0.05 Std for 8/27 - was 106% Rec (Same run on lachet)

| | | | |
|---|---|---|---|
| Prepared By: | D Davidson | Date Prepared: | 8/26/10 |
| Analyzed By: | | Date Analyzed: | |
| Reviewed By: | | Date Reviewed: | 8/31/10 |

Method: EPA 335.1 / 335.4

9012 / SM 4500-CN I&E / SM 4500-CN C&E

Analysis: Analysis: Total $CN^-$ $CN^-$ WAD Chlor. $CN^-$

Method modified using the Lachat Autoanalyzer for the colorimetric analysis.

| Date Prepared | Lab Sample ID | Sample Dilution | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | ug/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. | Reported mg/Kg( Dry) |
|---|---|---|---|---|---|---|---|---|---|
| | MB | 1 | | 25 | | #DIV/0! | | | |
| | LCS | 5 | 1 | 25 | 197 | 23.231 | | | |
| | 0.15 | 2 | 50 | 25 | 145.3 | 0.145 | | | |
| | 0.05 | 1 | 50 | 25 | 22.25 | 0.011 | | | |
| | 8653-1 | 1 | 2.523 | 25 | 11.34 | 0.112 | | | |
| | 8653-2 | 5 | 2.515 | 25 | -2.115 | -0.105 | | | |
| | 8685-16 | 5 | 2.700 | 25 | -2.396 | -0.111 | | | |
| | 8685-16d | 5 | 2.728 | 25 | -3.202 | -0.147 | | | |
| | 8685-16s | 1 | 2.674 | 25 | 123.9 | 1.158 | | | |
| | 8685-16sd | 1 | 2.814 | 25 | 35.18 | 0.313 | | | |
| | 8685-17 | 1 | 2.573 | 25 | 0.2433 | 0.002 | | | |
| | 8685-18 | 1 | 2.512 | 25 | 1.758 | 0.017 | | | |
| | 8685-19 | 1 | 2.518 | 25 | 1.593 | 0.016 | | | |
| | 8685-20 | 1 | 2.685 | 25 | 1.06 | 0.010 | | | |
| | 8857-1 | 1 | 2.942 | 25 | -2.288 | -0.019 | | | |
| | 8857-2 | 1 | 2.743 | 25 | 6.196 | 0.056 | | | |
| | 8971-3 | 1 | 2.395 | 25 | 0.95 | 0.010 | | | |
| | lcs2 | 5 | 1.013 | 25 | 202 | 24.926 | | | |

Comments: All standards and total cyanides distilled with sulfamic acid.

LCS: Inorganic Ventures Lot #: D522 ID # CN/5-93-U T.V. =26.6 mg/kg % REC:

0.15 Distilled = (0.75 mL x 10 ppm KCN) / 50 mL %REC= Qualitative test for sulfides:X

0.05 Distilled= (0.25 mL x 10 ppm KCN) / 50 mL %REC= Qualitative test for oxidants:X

10 ppm KCN ID #: CN/5-26-ee

ms= ((0.50 mL x 10 ppm KCN) / % REC: =

x = RPD =

msd= ((0.50 mL x 10 ppm KCN) / % REC: =

| | |
|---|---|
| Prepared By: | Date Prepared: |
| Analyzed By: | Date Analyzed: |
| Reviewed By: | Date Reviewed: 8/31/10 |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117996
**Team**: GenChem
**Analyst**: DDAVIDSON

**Prep Workflow**: Gen Dist CN
**Prep Method**: Method
**Rush/NPDES**: N/A

**Status**: Draft
**Current Step**: Distillation

**Prep Date**: 08/25/2010 16:00
**Due Date**: 08/23/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008750-02 | Method Blank | | 0 g | 25 mL | | | |
| KQ1008750-01 | Lab Control Sample | | 1.060 g | 25 mL | 1 g | 16255 | |
| KQ1008750-06 | Lab Control Sample | | 1.013 g | | 1 g | 16255 | |
| K1008653-001 | DM Cent Cake | .01 | 2.523 g | 25 mL | | | |
| K1008653-002 | RC Cake | .01 | 2.515 g | 25 mL | | | |
| K1008685-016 | LPRC15A | .02 | 2.700 g | 25 mL | | | |
| K1008685-016: KQ1008750-03 | Duplicate | .02 | 2.728 g | 25 mL | | | |
| K1008685-016: KQ1008750-04 | Matrix Spike | .02 | 2.674 g | 25 mL | 0.5 mL | 20596 | |
| K1008685-016: KQ1008750-05 | Duplicate Matrix Spike | .02 | 2.814 g | 25 mL | 0.5 mL | 20596 | |
| K1008685-017 | LPRC08A | .02 | 2.573 g | 25 mL | | | |
| K1008685-018 | LPRC09A | .02 | 2.512 g | 25 mL | | | |
| K1008685-019 | LPRC10A | .02 | 2.518 g | 25 mL | | | |
| K1008685-020 | LPRC12A | .02 | 2.685 g | 25 mL | | | |
| K1008857-001 | LPRC07C | .02 | 2.942 g | 25 mL | | | |
| K1008857-002 | LPRC13A | .02 | 2.743 g | 25 mL | | | |
| K1008971-003 | Sludge | .02 | 2.395 g | 25 mL | | | |

16 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Cyanide 10 ppm as CN | Spike | 20596 | 9/9/2010 | Cyanide LCS Soil | Spike | 16255 | 12/31/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 25-AUG-10 16:00 | 25-AUG-10 18:30 | DDAVIDSON | | N | |

**Comments**

LCS TV = 26.6

**Review**

Reviewed by: _____ Date: _____

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117996
**Team**: GenChem
**Analyst**: DDAVIDSON

**Prep Workflow**: Gen Dist CN
**Prep Method**: Method
**Rush/NPDES**: N/A

**Status**: Draft
**Current Step**: Distillation

**Prep Date**: 08/24/2010 15:00
**Due Date**: 08/23/2010

LCS2 = 1.013 g

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008750-02 | Method Blank | | 0 g | 25 mL | | | |
| KQ1008750-01 | Lab Control Sample | | 1.013 g 1.060 | 25 mL | 1 g | 16255 | |
| K1008653-001 | DM Cent Cake | .01 | 2.529 g 2.523 | 25 mL | | | |
| K1008653-002 | RC Cake | .01 | 2.609 g 2.515 | 25 mL | | | |
| K1008685-016 | LPRC15A | .02 | 2.558 g 2.700 | 25 mL | | | |
| K1008685-016: KQ1008750-03 | Duplicate | .02 | 2.620 g 2.728 | 25 mL | | | |
| K1008685-016: KQ1008750-04 | Matrix Spike | .02 | 2.106 g 2.674 | 25 mL | 0.5 mL | 20596 | |
| K1008685-016: KQ1008750-05 | Duplicate Matrix Spike | .02 | 2.661 g 2.814 | 25 mL | 0.5 mL | 20596 | |
| K1008685-017 | LPRC08A | .02 | 2.544 g 2.573 | 25 mL | | | |
| K1008685-018 | LPRC09A | .02 | 2.834 g 2.512 | 25 mL | | | |
| K1008685-019 | LPRC10A | .02 | ~~2.470 g~~ 2.518 | 25 mL | | | |
| K1008685-020 | LPRC12A | .02 | 2.775 g 2.685 | 25 mL | | | |
| K1008857-001 | LPRC07C | .02 | ~~2.618 g~~ 2.942 | 25 mL | | | |
| K1008857-002 | LPRC13A | .02 | ~~2.776 g~~ 2.743 | 25 mL | | | |
| K1008971-003 | Sludge | .02 | ~~2.368 g~~ 2.395 | 25 mL | | | |

Foamed Color

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Cyanide 10 ppm as CN | Spike | 20596 | 9/9/2010 | Cyanide LCS Soil | Spike | 16255 | 12/31/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| | 24-AUG-10 | 24-AUG-10 | | | | |

| | | | | |
|---|---|---|---|---|
| Distillation | 15:00 | 17:00 | DDAVIDSON | N |

**Comments**

**Review**

Reviewed by: _____ Date: _____

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117996
**Team**: GenChem
**Analyst**: DDAVIDSON
**Prep Workflow**: Gen Dist CN
**Prep Method**: Method
**Rush/NPDES**: N/A
**Status**: Draft
**Current Step**: Distillation
**Prep Date**: 08/24/2010 15:00
**Due Date**: 08/23/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008750-02 | Method Blank | | 0 g | 25 mL | | | |
| KQ1008750-01 | Lab Control Sample | | g 1.013 | 25 mL | 1 g | 16255 | |
| K1008653-001 | DM Cent Cake | .01 | g 2.529 | 25 mL | | | |
| K1008653-002 | RC Cake | .01 | g 2.609 | 25 mL | | | |
| K1008685-016 | LPRC15A | .02 | g 2.558 | 25 mL | | | |
| K1008685-016: KQ1008750-03 | Duplicate | .02 | g 2.620 | 25 mL | | | |
| K1008685-016: KQ1008750-04 | Matrix Spike | .02 | g 2.06 | 25 mL | 0.5 mL | 20596 | |
| K1008685-016: KQ1008750-05 | Duplicate Matrix Spike | .02 | g 2.661 | 25 mL | 0.5 mL | 20596 | |
| K1008685-017 | LPRC08A | .02 | g 2.544 | 25 mL | | | |
| K1008685-018 | LPRC09A | .02 | g 2.834 | 25 mL | | | |
| K1008685-019 | LPRC10A | .02 | g 2.470 | 25 mL | | | |
| K1008685-020 | LPRC12A | .02 | g 2.775 | 25 mL | | | |
| K1008857-001 | LPRC07C | .02 | g 2.618 | 25 mL | | | |
| K1008857-002 | LPRC13A | .02 | g 2.776 | 25 mL | | | |
| K1008971-003 | Sludge | .02 | g 68 2.576 | 25 mL | | | |

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Cyanide 10 ppm as CN | Spike | 20596 | 9/9/2010 | Cyanide LCS Soil | Spike | 16255 | 12/31/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| | 24-AUG-10 | 24-AUG-10 | | | | |

| | | | | |
|---|---|---|---|---|
| Distillation | 15:00 | 17:00 | DDAVIDSON | N |

## Comments

## Review

Reviewed by: _____ Date: _____

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117996
**Team**: GenChem
**Analyst**: DDAVIDSON

**Prep Workflow**: Gen Dist CN
**Prep Method**: Method
**Rush/NPDES**: N/A

**Status**: Draft
**Current Step**: Distillation

**Prep Date**: 08/24/2010 15:00
**Due Date**: 08/23/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008750-02 | Method Blank | | 0 g | 25 mL | | | |
| KQ1008750-01 | Lab Control Sample | | ~~1.004 g~~ 1.013g | 25 mL | 1 g | 16255 | |
| K1008653-001 | DM Cent Cake | .01 2.535 | ~~1.128 g~~ ~~2.584g~~ | 25 mL | | | |
| K1008653-002 | RC Cake | .01 | ~~1.150 g~~ 2.504 | 25 mL | | | |
| K1008685-016 | LPRC15A | .02 | ~~1.336 g~~ 2.584 | 25 mL | | | |
| K1008685-016: KQ1008750-03 | Duplicate | .02 | ~~1.342 g~~ 2.822 | 25 mL | | | |
| K1008685-016: KQ1008750-04 | Matrix Spike | .02 | 1.011 g | 25 mL | 0.5 mL | 20596 | |
| K1008685-016: KQ1008750-05 | Duplicate Matrix Spike | .02 | 1.058 g | 25 mL | 0.5 mL | 20596 | |
| K1008685-017 | LPRC08A | .02 | ~~1.117 g~~ 2.699 | 25 mL | | | |
| K1008685-018 | LPRC09A 2.834g | .02 | ~~1.072 g~~ 2.658 | 25 mL | | | |
| K1008685-019 | LPRC10A | .02 | ~~1.365 g~~ 2.724 | 25 mL | | | |
| K1008685-020 | LPRC12A | .02 | ~~1.428 g~~ 2.898 | 25 mL | | | |
| K1008857-001 | LPRC07C | .02 | ~~1.220 g~~ 3.270 | 25 mL | | | |
| K1008857-002 | LPRC13A 2.776g | .02 | ~~1.349 g~~ 3.436 | 25 mL | | | |
| K1008971-003 | Sludge | .02 | 1.008 g 2.193 | 25 mL | | | |

Return

D20

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Cyanide 10 ppm as CN | Spike | 20596 | 9/9/2010 | Cyanide LCS Soil | Spike | 16255 | 12/31/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| | 24-AUG-10 | 24-AUG-10 | | | | |

| | | | | |
|---|---|---|---|---|
| Distillation | 15:00 | 17:00 | DDAVIDSON | N |

**Comments**

**Review**

Reviewed by: _____ Date: _____

Work Request # Original (HDO 8428, 8437, 8438, 8507, 8547, 8694, 8796

Tier: II II I II II I II

Date Analyzed: 8/23/10

8857

Analyst: DDavidson

V

Analysis: CN- Tot

213916

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

**COMMENTS:**

Final Approved by: MS Date: 8/24/10

DQREPORT

R:\WET\FORMS\LAB\DATAQUAL.DOC

# Analytical Results Summary

**trument Name:** K-FIA-03 **Analyst:** DDAVIDSON **Analysis Lot:** 213916 **Method/Testcode:** SM 4500-CN- E/CN T

| Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8428-004 | Cyanide, Total | N/A | | Drinking Water | -0.42 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8437-001 | Cyanide, Total | N/A | | Water | -0.27 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8437-002 | Cyanide, Total | N/A | | Water | -0.99 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8437-003 | Cyanide, Total | N/A | | Water | -0.80 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8437-004 | Cyanide, Total | N/A | | Water | -0.69 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8438-001 | Cyanide, Total | N/A | | Drinking Water | -0.70 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 8438-002 | Cyanide, Total | N/A | | Drinking Water | 5.05 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 8507-001 | Cyanide, Total | N/A | | Water | -1.87 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8547-001 | Cyanide, Total | N/A | | Water | -0.17 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8547-002 | Cyanide, Total | N/A | | Water | -1.38 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8547-003 | Cyanide, Total | N/A | | Water | -0.66 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8547-004 | Cyanide, Total | N/A | | Water | -0.67 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8694-001 | Cyanide, Total | N/A | | Water | 0.27 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8694-002 | Cyanide, Total | N/A | | Water | -1.55 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8694-003 | Cyanide, Total | N/A | | Water | -0.40 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8694-004 | Cyanide, Total | N/A | | Water | 0.88 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8694-005 | Cyanide, Total | N/A | | Water | -1.05 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8799-001 | Cyanide, Total | N/A | | Drinking Water | 0.30 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | II |
| 8857-003 | Cyanide, Total | N/A | | Water | 23.63 µg/L | 50 mL | 0.012 mg/L | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | V |
| 08673-01 | Cyanide, Total | LCS | | Drinking Water | 150.50 µg/L | 5 mL | 0.753 mg/L | 1 | 0.003 | 0.010 | 103 | | 8/23/10 12:00:00 | N | I |
| 08673-02 | Cyanide, Total | LCS | | Drinking Water | 150.50 µg/L | 5 mL | 0.753 mg/L | 1 | 0.003 | 0.010 | 103 | 100% | 8/23/10 12:00:00 | N | I |
| 08673-02 | Cyanide, Total | LCS | | Drinking Water | 150.50 µg/L | 5 mL | 0.753 mg/L | 1 | 0.003 | 0.010 | 103 | | 8/23/10 12:00:00 | N | I |
| 08673-02 | Cyanide, Total | LCS | | Drinking Water | 150.50 µg/L | 5 mL | 0.753 mg/L | 1 | 0.003 | 0.010 | 103 | | 8/23/10 12:00:00 | N | I |
| 08673-03 | Cyanide, Total | MB | | Drinking Water | -1.87 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 08673-04 | Cyanide, Total | MB | | Drinking Water | -1.87 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 08673-04 | Cyanide, Total | MB | | Drinking Water | -1.87 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 08673-04 | Cyanide, Total | MB | | Drinking Water | -1.87 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 08673-06 | Cyanide, Total | MS | K1008437-001 | Water | 203.10 µg/L | 50 mL | 0.102 mg/L | 1 | 0.003 | 0.010 | | | 8/23/10 12:00:00 | N | I |
| 08673-07 | Cyanide, Total | DMS | K1008437-001 | Water | 198.10 µg/L | 50 mL | 0.099 mg/L | 1 | 0.003 | 0.010 | | 2 | 8/23/10 12:00:00 | N | I |
| 08673-08 | Cyanide, Total | DUP | K1008437-001 | Water | -1.25 µg/L | 50 mL | 0.010 mg/L U | 1 | 0.003 | 0.010 | | NA | 8/23/10 12:00:00 | N | I |
| 08745-01 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 08745-02 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 08745-03 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 08745-04 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |

ates Final Result is not yet adjusted for Solids because it has not yet been determined.

141

# Analytical Results Summary

**strument Name:** K-FIA-03 **Analyst:** DDAVIDSON **Analysis Lot:** 213916 **Method/Testcode:** SM 4500-CN- E/CN T

| Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008745-05 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-06 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-07 | Cyanide, Total | CCB | | Drinking Water | 0.00 µg/L | mL | 0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-08 | Cyanide, Total | CCV | | Drinking Water | 105.00 µg/L | mL | 105.0 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-09 | Cyanide, Total | CCV | | Drinking Water | 106.10 µg/L | mL | 106.1 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-10 | Cyanide, Total | CCV | | Drinking Water | 104.80 µg/L | mL | 104.8 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-11 | Cyanide, Total | CCV | | Drinking Water | 105.30 µg/L | mL | 105.3 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-12 | Cyanide, Total | CCV | | Drinking Water | 107.10 µg/L | mL | 107.1 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-13 | Cyanide, Total | CCV | | Drinking Water | 105.50 µg/L | mL | 105.5 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |
| 1008745-14 | Cyanide, Total | CCV | | Drinking Water | 105.30 µg/L | mL | 105.3 mg/L | 1 | | | | | 8/23/10 12:00:00 | N | II |

142

ates Final Result is not yet adjusted for Solids because it has not yet been determined.

Method: EPA 335.1 / 335.4

9012 / SM 4500-CN I&E / SM 4500-CN C&E

Analysis: Analysis: Total $CN^-$ $CN^-$ WAD Chlor. $CN^-$

Method modified using the Lachat Autoanalyzer for the colorimetric analysis.

| Date Prepared | Lab Sample ID | Sample Dilution | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | ug/L (in solution) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. | Reported mg/Kg( Dry) |
|---|---|---|---|---|---|---|---|---|---|
| 8/23/10 | MB | 1 | 8/24/10 | 25 | | #DIV/0! 8/24/10 | | | |
| | LCS | 1 | ~~50~~ 5 | 25 | 150.5 | ~~0.075~~ 0.753 | | | |
| | 0.15 | 2 | 50 | 25 | 147.4 | 0.147 | | | |
| | 0.05 | 1 | 50 | 25 | 105.9 | 0.053 | | | |
| | LCS -2 | 1 | ~~50~~ 5 | 25 | 138.1 | ~~0.069~~ 0.691 | | | |
| | | | 8/24/10 | | | DD 8/24/10 | | | |

Comments: All standards and total cyanides distilled with sulfamic acid.

LCS: Inorganic Ventures Lot #: D522 ID # CN/5-93-U T.V. =~~26.6~~ 0.71 mg/L mg/kg % REC:

0.15 Distilled = (0.75 mL x 10 ppm KCN) / 50 mL %REC= 98 Qualitative test for sulfides:X

0.05 Distilled= (0.25 mL x 10 ppm KCN) / 50 mL %REC= 106 Qualitative test for oxidants:X

10 ppm KCN ID #: CN/5-26-ee

ns= ((0.50 mL x 10 ppm KCN) / LCS % REC: = 106

x = RPD = LCS2 = 97

msd= ((0.50 mL x 10 ppm KCN) / % REC: =

| | | | |
|---|---|---|---|
| Prepared By: | D Davidson | Date Prepared: | 8/23/10 |
| Analyzed By: | | Date Analyzed: | |
| Reviewed By: | MJS | Date Reviewed: | 8/24/10 |

Author: Omnion User

Date : 8/23/2010

Original Run Filename: OM_8-23-2010_06-48-52PM.OMN created 8/23/2010 6:48:52 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_8-23-2010_06-48-52PM.OMN last modified 8/23/2010 8:12:58 PM
Current Run Author's Signature: [Omnion User]
Description: Default new Run

| Sample | Rep. | Channel 2 Cyanide (ug/L) |
|---|---|---|
| Cal Std A | 1 | 300.0 |
| Cal Std B | 1 | 200.0 |
| Cal Std C | 1 | 150.0 |
| Cal Std D | 1 | 100.0 |
| Cal Std E | 1 | 50.00 |
| Cal Std F | 1 | 20.00 |
| Cal Std G | 1 | 10.00 |
| | 2 | 10.00 |
| Blank | 1 | 0.000 |
| | 2 | 0.000 |
| ICV | 1 | 158.5 |
| Calibration: | | Table/Fig. 1 |
| ICB | 1 | -1.415 |
| CCV | 1 | 105.0 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.578 |
| Known Conc: | | 0.000 |
| MB | 1 | -1.871 |
| 0.15 X2 | 1 | 147.4 |
| 0.05 | 1 | 105.9 |
| LCS | 1 | 150.5 |
| 8428-4 | 1 | -0.4196 |
| 8437-1 | 1 | -0.2725 |
| 8437-1D | 1 | -1.249 |
| 8437-1MS | 1 | 203.1 |
| 8437-1SD | 1 | 198.1 |
| 8437-2 | 1 | -0.9932 |
| CCV | 1 | 106.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.246 |
| Known Conc: | | 0.000 |
| 8437-3 | 1 | -0.8003 |
| 8437-4 | 1 | -0.6940 |
| 8438-1 | 1 | -0.7036 |
| 8438-2 | 1 | 5.055 |
| 8447-1 | 1 | 19.28 |
| 8507-1 | 1 | -1.867 |
| 8547-1 | 1 | -0.1712 |
| 8547-2 | 1 | -1.378 |
| 8547-3 | 1 | -0.6578 |
| 8547-4 | 1 | -0.6698 |
| CCV | 1 | 104.8 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.509 |
| Known Conc: | | 0.000 |
| 8694-1 | 1 | 0.2686 |
| 8694-2 | 1 | -1.546 |
| 8694-3 | 1 | -0.3959 |
| 8694-4 | 1 | 0.8775 |
| 8694-5 | 1 | -1.053 |
| 8799-1 | 1 | 0.3001 |
| 8857-3 | 1 | 23.63 |
| 8964-1 | 1 | 0.7803 |
| 8974-1 | 1 | -0.9964 |
| 8974-2 | 1 | -1.137 |
| CCV | 1 | 105.3 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.449 |

1 CCV

2 CCV

3 CCV

4 CCV

117904 prep run
Run 213916

redistilled w/ run 213901 - Sample foamed.

50 / 25 mls

Prep Run 117934
Run# 213901

Author: Omnion User

Date : 8/23/2010

| | | |
|---|---|---|
| 8974-3 | 1 | -0.9639 |
| 8974-4 | 1 | -1.247 |
| 8875-1 | 1 | -1.233 |
| 8686-1 | 1 | 12.10 |
| 8686-2 | 1 | 8.189 |
| 8686-3 | 1 | 7.895 |
| 8686-4 | 1 | 4.492 |
| MB | 1 | -1.360 |
| LCS | 1 | 138.1 |
| 8214-5 | 1 | 1304 |
| 5 CCV | 1 | 107.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.042 |
| Known Conc: | | 0.000 |
| 8447-1 REDIST | 1 | 26.58 |
| 8697-1 | 1 | 2.375 |
| 8697-1D | 1 | -0.8411 |
| 8697-1MS | 1 | 216.2 |
| 8697-1SD | 1 | 198.1 |
| 8697-2 | 1 | 0.3017 |
| 8697-3 | 1 | 28.68 |
| 8697-4 | 1 | 3.711 |
| 8866-1 | 1 | 0.4545 |
| 8866-2 | 1 | 0.1883 |
| 6 CCV | 1 | 105.5 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.479 |
| Known Conc: | | 0.000 |
| 8866-3 | 1 | -0.3725 |
| 8866-4 | 1 | 1.505 |
| ~~8214-5 X5~~ | ~~1~~ | ~~159.6~~ wrong tube# |
| ~~Sample78~~ | ~~1~~ | ~~159.5~~ |
| 8214-5 X5 | 1 | 332.1 |
| CCV | 1 | 105.4 |
| Known Conc: | | 100.0 |
| Sample81 | 1 | 92.33 -wrong tube# rs |
| 7 CCV | 1 | 105.3 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.416 |
| Known Conc: | | 0.000 |

Author: Omnion User

Date : 8/23/2010

| | | |
|---|---|---|
| Known Conc: | | 0.000 |
| 8974-3 | 1 | -0.9639 |
| 8974-4 | 1 | -1.247 |
| 8875-1 | 1 | -1.233 |
| 8686-1 | 1 | 12.10 |
| 8686-2 | 1 | 8.189 |
| 8686-3 | 1 | 7.895 |
| 8686-4 | 1 | 4.492 |
| MB | 1 | -1.360 |
| LCS | 1 | 138.1 |
| 8214-5 | 1 | 1304 |
| CCV | 1 | 107.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.042 |
| Known Conc: | | 0.000 |
| 8447-1 REDIST | 1 | 26.58 |
| 8697-1 | 1 | 2.375 |
| 8697-1D | 1 | -0.8411 |
| 8697-1MS | 1 | 216.2 |
| 8697-1SD | 1 | 198.1 |
| 8697-2 | 1 | 0.3017 |
| 8697-3 | 1 | 28.68 |
| 8697-4 | 1 | 3.711 |
| 8866-1 | 1 | 0.4545 |
| 8866-2 | 1 | 0.1883 |
| CCV | 1 | 105.5 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.479 |
| Known Conc: | | 0.000 |
| 8866-3 | 1 | -0.3725 |
| 8866-4 | 1 | 1.505 |
| ~~8214-5 X5~~ | ~~1~~ | ~~159.6~~ |
| Sample78 | 1 | 159.5 |
| ~~8214-5 X5~~ | ~~1~~ | ~~332.1~~ |
| CCV | 1 | 105.4 |
| Known Conc: | | 100.0 |
| ~~Sample81~~ | ~~1~~ | ~~92.33~~ |
| CCV | 1 | 105.3 |
| Known Conc: | | 100.0 |
| CCB | 1 | -1.416 |
| Known Conc: | | 0.000 |

Tube #5 incorrect

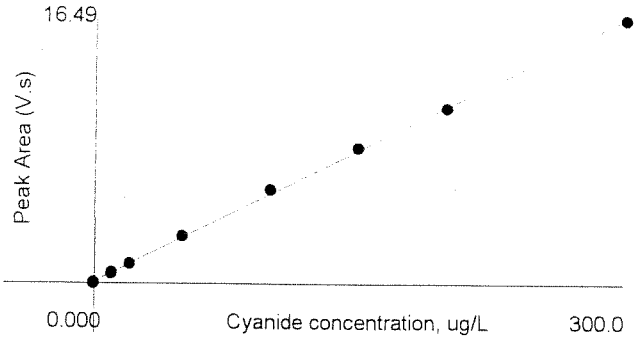
Table 1: Cyanide

| | Known Conc. (ug/L) | Rep | Peak Area (V.s) | Peak Height (V) | % RSD | % Residual | Det. Conc. (ug/L) | Detection Date | Detection Time |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 300.0 | 1 | 16.49 | 1.014 | 0.0 | 0.5 | 298.3 | 8/23/2010 | 6:49:41 PM |
| 2 | 200.0 | 1 | 10.96 | 0.6778 | 0.0 | 1.1 | 197.6 | 8/23/2010 | 6:50:31 PM |
| 3 | 150.0 | 1 | 8.494 | 0.5288 | 0.0 | -1.8 | 152.7 | 8/23/2010 | 6:51:23 PM |
| 4 | 100.0 | 1 | 5.860 | 0.3678 | 0.0 | -4.8 | 104.8 | 8/23/2010 | 6:52:15 PM |
| 5 | 50.00 | 1 | 2.915 | 0.1826 | 0.0 | -2.4 | 51.27 | 8/23/2010 | 6:53:08 PM |
| 6 | 20.00 | 1 | 1.189 | 0.07449 | 0.0 | 0.8 | 19.86 | 8/23/2010 | 6:54:02 PM |
| 7 | 10.00 | 1 | 0.6236 | 0.03980 | 3.0 | 3.9 | 9.581 | 8/23/2010 | 6:54:56 PM |
| 8 | 10.00 | 2 | 0.5979 | 0.03896 | 3.0 | 7.8 | 9.113 | 8/23/2010 | 6:55:51 PM |
| 9 | 0.000 | 1 | 0.001375 | 9.130e-4 | | | -1.738 | 8/23/2010 | 6:56:45 PM |
| 10 | 0.000 | 2 | 0.01057 | 0.001037 | | | -1.570 | 8/23/2010 | 6:57:40 PM |

Author: Omnion User

Date : 8/23/2010

Figure 1: Cyanide




Area = 0.05495 * Conc + 0.09921
Conc = 18.19 * Area - 1.763
Correlation Coefficient (r) = 0.99975

No Weighting

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117904
**Team**: GenChem
**Analyst**: DDAVIDSON

**Prep Workflow**: Gen Dist CN
**Prep Method**: Method,SM 4500-CN-C
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/23/2010 12:00
**Due Date**: 08/17/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008673-03 | Method Blank | | 50 mL | 25 mL | | | |
| KQ1008673-04 | Method Blank | | 50 mL | 25 mL | | | |
| KQ1008673-01 | Lab Control Sample | | 5 mL | 25 mL | 5 mL | 20597 | |
| KQ1008673-02 | Lab Control Sample | | 5 mL | 25 mL | 5 mL | 20597 | |
| K1008428-004 | Well 21 | .03 | 50 mL | 25 mL | | | |
| K1008437-001 | Well8:BA95875 | .02 | 50 mL | 25 mL | | | |
| K1008437-001: KQ1008673-08 | Duplicate | .02 | 50 mL | 25 mL | | | |
| K1008437-001: KQ1008673-06 | Matrix Spike | .02 | 50 mL | 25 mL | 0.5 mL | 20596 | |
| K1008437-001: KQ1008673-07 | Duplicate Matrix Spike | .02 | 50 mL | 25 mL | 0.5 mL | 20596 | |
| K1008437-002 | Well12:BA95876 | .02 | 50 mL | 25 mL | | | |
| K1008437-003 | Well14:BA95877 | .02 | 50 mL | 25 mL | | | |
| K1008437-004 | Well35:BA95878 | .02 | 50 mL | 25 mL | | | |
| K1008438-001 | Mill Water | .04 | 50 mL | 25 mL | | | |
| K1008438-002 | Filtered Water | .04 | 50 mL | 25 mL | | | |
| K1008507-001 | GWPS Outlet:BA95984 | .02 | 50 mL | 25 mL | | | |
| K1008547-001 | Well3:BA95929 | .02 | 50 mL | 25 mL | | | |
| K1008547-002 | Well4:BA95930 | .02 | 50 mL | 25 mL | | | |
| K1008547-003 | Well10:BA95931 | .02 | 50 mL | 25 mL | | | |
| K1008547-004 | Well3:BA95966 | .02 | 50 mL | 25 mL | | | |
| K1008694-001 | P5: BA95985 | .03 | 50 mL | 25 mL | | | |
| K1008694-002 | P13: BA95986 | .03 | 50 mL | 25 mL | | | |
| K1008694-003 | P15: BA95987 | .03 | 50 mL | 25 mL | | | |
| K1008694-004 | P36: BA96015 | .03 | 50 mL | 25 mL | | | |
| K1008694-005 | Powell Butte: BA95990 | .03 | 50 mL | 25 mL | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K1008799-001 | WELL 13.1 | .03 | 50 mL | 25 mL | | | |
| K1008857-003 | LPRC07C-RB | .03 | 50 mL | 25 mL | | | |

26 Total Samples consisting of 19 Client Samples, 3 Client QC Samples, 4 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| Cyanide 10 ppm as CN | Spike | 20596 | 9/9/2010 | Cyanide Working LCS Total | Spike | 20597 | 8/23/2010 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 23-AUG-10 12:00 | 23-AUG-10 14:00 | DDAVIDSON | | N | |

## Comments

LCS TV = 0.71

## Review

Reviewed by: _____ Date: _____

Author: Omnion User

Date : 8/26/2010

Original Run Filename: OM_8-26-2010_11-19-43AM.OMN created 8/26/2010 11:19:43 AM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_8-26-2010_11-19-43AM.OMN last modified 8/26/2010 12:06:12 PM
Current Run Author's Signature: [Omnion User]
Description: Default new Run

| Sample | Rep. | Channel 2 Cyanide (ug/L) |
|---|---|---|
| Cal Std A | 1 | 300.0 |
| Cal Std B | 1 | 200.0 |
| Cal Std C | 1 | 150.0 |
| Cal Std D | 1 | 100.0 |
| Cal Std E | 1 | 50.00 |
| Cal Std F | 1 | 20.00 |
| Cal Std G | 1 | 10.00 |
| | 2 | 10.00 |
| Blank | 1 | 0.000 |
| | 2 | 0.000 |
| ICV | 1 | 164.2 |
| Calibration: | | Table/Fig. 1 |
| ICB | 1 | 14.24 |
| CCV | 1 | 102.7 |
| Known Conc: | | 100.0 |
| CCB | 1 | -3.320 |
| Known Conc: | | 0.000 |
| MB | 1 | 13.91 |
| LCS SOIL X5 | 1 | 175.1 |
| 0.150 dist 2X | 1 | 45.51 |
| 0.050 dist | 1 | 132.2 |
| 8653-1 | 1 | 63.17 |
| 8653-2 | 1 | 23.71 |
| 8685-16 | 1 | 0.6561 |
| 8685-16D | 1 | 7.076 |
| 8685-16MS | 1 | -6.185 |
| 8685-16SD | 1 | -5.140 |
| CCV | 1 | 101.9 |
| Known Conc: | | 100.0 |
| CCB | 1 | -3.614 |
| Known Conc: | | 0.000 |
| 8685-17 | 1 | -2.945 |
| 8685-18 | 1 | 3.310 |
| 8685-19 | 1 | -4.108 |
| 8685-20 | 1 | 18.44 |
| 8857-1 | 1 | 53.60 |
| 8857-2 | 1 | 79.04 |
| MB 85/20 | 1 | -3.931 |
| LCS | 1 | 22.38 |
| 8945-1 | 1 | 3.526 |
| 8945-1D | 1 | -0.7623 |
| CCV | 1 | 102.1 |
| Known Conc: | | 100.0 |
| CCB | 1 | -3.195 |
| Known Conc: | | 0.000 |
| 8945-1S | 1 | 181.7 |
| 8945-1SD | 1 | 166.1 |
| 8945-2 | 1 | 1.996 |
| 8945-3 | 1 | -5.033 |
| 8964-1 85/20 | 1 | -5.050 |
| 9039-1 85/20 | 1 | -2.118 |
| 9039-2 85/20 | 1 | -3.887 |
| 9039-3 85/20 | 1 | -3.334 |
| 9039-4 85/20 | 1 | 69.09 |
| 8917-4 | 1 | -11.60 |
| CCV | 1 | -13.21 |
| Known Conc: | | 100.0 |

132.2
45.5

no spike added

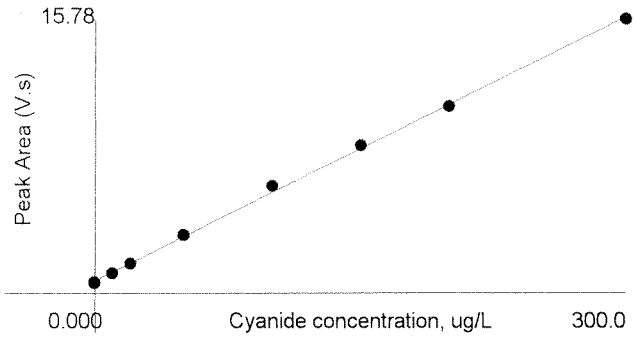
0.1 – 100

Original analysis from Vacuum problems...

Table 1: Cyanide

| | Known Conc. (ug/L) | Rep | Peak Area (V.s) | Peak Height (V) | % RSD | % Residual | Det. Conc. (ug/L) | Detection Date | Detection Time |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 300.0 | 1 | 15.78 | 1.051 | 0.0 | 0.9 | 297.0 | 8/26/2010 | 11:20:36 AM |
| 2 | 200.0 | 1 | 10.75 | 0.7171 | 0.0 | 1.0 | 197.9 | 8/26/2010 | 11:21:27 AM |
| 3 | 150.0 | 1 | 8.492 | 0.5677 | 0.0 | -2.1 | 153.4 | 8/26/2010 | 11:22:18 AM |
| 4 | 100.0 | 1 | 6.132 | 0.4130 | 0.0 | -6.1 | 106.9 | 8/26/2010 | 11:23:10 AM |
| 5 | 50.00 | 1 | 3.318 | 0.2245 | 0.0 | -2.4 | 51.55 | 8/26/2010 | 11:24:03 AM |
| 6 | 20.00 | 1 | 1.704 | 0.1148 | 0.0 | 0.9 | 19.76 | 8/26/2010 | 11:24:57 AM |
| 7 | 10.00 | 1 | 1.148 | 0.07773 | 1.2 | 5.2 | 8.822 | 8/26/2010 | 11:25:51 AM |
| 8 | 10.00 | 2 | 1.130 | 0.07694 | 1.2 | 6.8 | 8.449 | 8/26/2010 | 11:26:45 AM |
| 9 | 0.000 | 1 | 0.6105 | 0.04136 | | | -1.771 | 8/26/2010 | 11:27:40 AM |
| 10 | 0.000 | 2 | 0.5997 | 0.04037 | | | -1.983 | 8/26/2010 | 11:28:35 AM |

Figure 1: Cyanide




Area = 0.05074 * Conc + 0.7043
Conc = 19.69 * Area - 13.79
Correlation Coefficient (r) = 0.99954

No Weighting

Work Request # (Original) 8857

Tier: III

Date Analyzed: 8/24/10

Analyst: CES

Analysis: 9030M

118940
215817

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:** ↳ 8857

8857-1/1d RPD = 27
Dark soupy non homogenous sample.

Final Approved by: MLS Date: 9/14/10

DQREPORT

Work Order #.: _____ Method: 9030M

Analysis: Total Sulfides

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.000 | 0.046 | 0.463 | 0.925 | 1.388 | 1.850 | 2.313 | | | | Slope = | 0.5962 |
| Absorbance | 0.0000 | 0.0362 | 0.3079 | 0.6009 | 0.8743 | 1.1175 | 1.3772 | | | | Y Int. = | 0.0215 |

(R) = 0.9992

| Date Prep'd | Sample # | Dil. Factor | Absorb. @ 670 nm | Conc. from Curve (mg/L) | Actual Conc. (mg/L) | Initial Wt./Vol. (g) / (ml) | Final Vol. (ml) | A Tower mg/L (solution) | B Tower mg/L (solution) | A & B mg/L - mg/kg as rec'd | % Solid | mg/kg dry | mg/kg reported | mrl | mdl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/23/2010 | ICV | 1 | 1.263 | 2.0830 | 2.0830 | 40 | 40 | 2.08 | | 2.08 | | | | | |
| 8/23/2010 | ICB | 1 | 0.000 | -0.0361 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/23/2010 | CCB1 | 1 | 0.000 | -0.0361 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/23/2010 | CCV1 | 1 | 1.116 | 1.8354 | 1.8354 | 40 | 40 | 1.84 | | 1.84 | | | | | |
| 8/23/2010 | MB | 1 | 0.000 | -0.0358 | <0.05 | 10.0 | 40 | <0.05 | -0.14 | <0.05 | | | | | |
| 8/23/2010 | LCS | 1 | 1.119 | 1.8416 | 1.8416 | 10.0 | 40 | 7.37 | -0.12 | 7.37 | | | | | |
| 8/23/2010 | 8857-1 | 1 | 0.664 | 1.0772 | 1.0772 | 10.188 | 40 | 4.23 | -0.10 | 4.23 | 66.1 | 6.40 | 6.40 | 0.76 | 0.30 |
| 8/23/2010 | 8857-1d | 1 | 0.509 | 0.8179 | 0.8179 | 10.175 | 40 | 3.22 | -0.13 | 3.22 | 66.1 | 4.86 | 4.86 | 0.76 | 0.30 |
| 8/23/2010 | 8857-1s | 100 | 0.624 | 1.0113 | 101.1297 | 10.053 | 40 | 402.39 | -0.05 | 402.39 | 66.1 | 608.75 | 609 | 75.6 | 30.3 |
| 8/23/2010 | 8857-1sd | 100 | 0.589 | 0.9524 | 95.2419 | 10.322 | 40 | 369.08 | 0.02 | 369.08 | 66.1 | 558.37 | 558 | 75.6 | 30.3 |
| 8/23/2010 | 8857-2 | 1 | 1.182 | 1.9466 | 1.9466 | 10.152 | 40 | 7.67 | -0.14 | 7.67 | 72.9 | 10.52 | 10.5 | 0.69 | 0.27 |
| 8/23/2010 | CCV2 | 1 | 1.114 | 1.8327 | 1.8327 | 40 | 40 | 1.83 | | 1.83 | | | | | |
| 8/23/2010 | CCB2 | 1 | 0.000 | -0.0361 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |
| 8/23/2010 | CCV3 | 1 | 1.116 | 1.8363 | 1.8363 | 40 | 40 | 1.84 | | 1.84 | | | | | |
| 8/23/2010 | CCB3 | 1 | 0.000 | -0.0361 | <0.05 | 40 | 40 | <0.05 | | <0.05 | | | | | |

CCV =2ml*37.0mg/l/40ml= 1.85mg/l %REC =99, 99, 99

LCS =2ml*37.0mg/l/10.0 g =7.40mg/kg %REC = 100

ICV = 2.25ml*37.0mg/L/40ml = 2.08mg/L %REC = 100

MS = (1ml*3700 mg/L/10.053g)/.661= 557mg/kg %REC =109 8857-1/1d X=5.63 RPD=27

MSD = (1ml* 3700mg/L/10.322g)/.661=542 mg/kg %REC =103

STD ID# S2/2-2-J CONC. = 3700

| | | | |
|---|---|---|---|
| Distilled by: | CES | Date Distilled: | 8/23/10 2000 |
| Analyzed By: | CES | Date Analyzed: | 8/24/10 0032 |
| Reviewed By: | MLS | Date Reviewed: | 9/14/10 |

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: _____

Analysis: _____

Prep Date : 8/23/2010

| | STD1 | STD 2 | STD 3 | STD 4 | STD 5 | STD 6 | STD 7 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc. (mg/L) | 0.0000 | 0.0463 | 0.4625 | 0.9250 | 1.3875 | 1.8500 | 2.3125 | | | | | |
| Absorbance | 0.0000 | 0.0362 | 0.3079 | 0.6009 | 0.8743 | 1.1175 | 1.3772 | | | | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|
| ICV | 40 | 1 | 1.2633 | | |
| ICB | 40 | 1 | 0.0000 | | |
| CCB | 40 | 1 | 0.0000 | | |
| CCV | 40 | 1 | 1.1157 | | |
| MB | 10.0 | 1 | 0.0002 | 0.0003 | |
| LCS | 10.0 | 1 | 1.1194 | 0.0042 | |
| 8857-1 | 10.188 | 1 | 0.6637 | 0.0070 | 66.1 |
| 8857-1d | 10.175 | 1 | 0.5091 | 0.0023 | 66.1 |
| 8857-1s | 10.053 | 100 | 0.6244 | 0.0135 | 66.1 |
| 8857-1sd | 10.322 | 100 | 0.5893 | 0.0241 | 66.1 |
| 8857-2 | 10.152 | 1 | 1.1820 | 0.0006 | 72.9 |
| CCV2 | 40 | 1 | 1.1141 | | |
| CCB2 | 40 | 1 | 0.0000 | | |
| CCV3 | 40 | 1 | 1.1162 | | |
| CCB3 | 40 | 1 | 0.0000 | | |

| Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | Dilution Factor | Abs of A tower @ 670 nm | Abs of B tower @ 670 nm | % Solids |
|---|---|---|---|---|---|

~~117939~~
118940
~~214273~~ CCS 9/8/10
215817

Date : 8/24/2010 Time : 00:56:31

Concentration Results

Date: 8/24/2010 Time: 0:40:13 AM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-23-10
Ordinate mode: Single wavelength
Slit: UV/VIS: 1.00 nm
Baseline: No correction ( 0.00 0.00 )
Result Filename: TEMP.RCO
Autozero performed: 8/24/2010 0:32:13 AM
Analyst: cfs

| Wavelength(s) | | Sample ID | Ordinate | Factor | Concentration | | Sample Info |
|---|---|---|---|---|---|---|---|
| 670.0 | 0.0 | ICV | 1.2633 | 1.0000 | 2.0829 | mg/l | |
| 670.0 | 0.0 | ICB | -0.002 | 1.0000 | -0.040* | mg/l | |
| 670.0 | 0.0 | CCB1 | -0.003 | 1.0000 | -0.040* | mg/l | |
| 670.0 | 0.0 | CCV1 | 1.1157 | 1.0000 | 1.8353 | mg/l | |
| 670.0 | 0.0 | MB | 0.0002 | 1.0000 | -0.035 | mg/l | |
| 670.0 | 0.0 | LCS | 1.1194 | 1.0000 | 1.8416 | mg/l | |
| 670.0 | 0.0 | 8857-1 | 0.6637 | 1.0000 | 1.0772 | mg/l | |
| 670.0 | 0.0 | 8857-1d | 0.5091 | 1.0000 | 0.8180 | mg/l | |
| 670.0 | 0.0 | 8857-1ms | 0.6244 | 1.0000 | 1.0114 | mg/l | |
| 670.0 | 0.0 | 8857-1sd | 0.5893 | 1.0000 | 0.9525 | mg/l | |
| 670.0 | 0.0 | 8857-2 | 1.1820 | 1.0000 | 1.9466 | mg/l | |
| 670.0 | 0.0 | MBb | 0.0003 | 1.0000 | -0.035 | mg/l | |
| 670.0 | 0.0 | LCSb | 0.0042 | 1.0000 | -0.028 | mg/l | |
| 670.0 | 0.0 | 8857-1b | 0.0070 | 1.0000 | -0.024 | mg/l | |
| 670.0 | 0.0 | CCV2 | 1.1141 | 1.0000 | 1.8327 | mg/l | |
| 670.0 | 0.0 | CCB2 | -0.003 | 1.0000 | -0.041* | mg/l | |
| 670.0 | 0.0 | 8857-1db | 0.0023 | 1.0000 | -0.032 | mg/l | |
| 670.0 | 0.0 | 8857-1sb | 0.0135 | 1.0000 | -0.013 | mg/l | |
| 670.0 | 0.0 | 8857-1sd | 0.0241 | 1.0000 | 0.0046 | mg/l | |
| 670.0 | 0.0 | 8857-2b | 0.0006 | 1.0000 | -0.034 | mg/l | |
| 670.0 | 0.0 | CCV3 | 1.1162 | 1.0000 | 1.8362 | mg/l | |
| 670.0 | 0.0 | CCB3 | -0.003 | 1.0000 | -0.042* | mg/l | |
| 670.0 | 0.0 | | -0.004 | 1.0000 | -0.042* | mg/l | |
| 670.0 | 0.0 | | -0.003 | 1.0000 | -0.042* | mg/l | |

CALIBRATION

Date: 8/24/2010 Time: 0:32:14 AM
Instrument: PerkinElmer Lambda 25 Serial No: 501S08110503
Method: 8-23-10
Ordinate mode: Single wavelength
Baseline: No correction ( 0.00 0.00 )
Analyst: cfs

CES 8/23/10

| Wavelength(s) | | Sample ID | Concentration | | Ord. value | Comment |
|---|---|---|---|---|---|---|
| 670.0 | 0.0 | 8-23-10.A01 | 0.0000 | mg/l | -0.000 | |
| 670.0 | 0.0 | 8-23-10.A02 | 0.0463 | mg/l | 0.0362 | |
| 670.0 | 0.0 | 8-23-10.A03 | 0.4625 | mg/l | 0.3079 | |
| 670.0 | 0.0 | 8-23-10.A04 | 0.9250 | mg/l | 0.6009 | |
| 670.0 | 0.0 | 8-23-10.A05 | 1.3875 | mg/l | 0.8743 | |
| 670.0 | 0.0 | 8-23-10.A06 | 1.8500 | mg/l | 1.1175 | |
| 670.0 | 0.0 | 8-23-10.A07 | 2.3125 | mg/l | 1.3772 | |

Equation: y = 2.138611e-02 + 5.962266e-01 * x

Residual error: 0.023535
Correlation coefficient: 0.999189

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.:

Analysis: 9030/ 9030M/ AVS/ PSEP

| Date Prepared | Sample Name / Lab Code | Initial Wt./Vol. (g) or (ml) | Final Volume (ml) | mg/L - mg/kg As Rec'd | % Solids | mg/kg Dry Wt. |
|---|---|---|---|---|---|---|
| 8/23/10 | MB1 | 10.0 g | ① ~~50~~ 40 | | | |
| | LCS1 | 10.0 | | | | |
| | 8857-1 | 10.188 | | | | |
| | 1d | 10.175 | | | | |
| | 1ms | 10.053 | | | | |
| | 1msd | 10.322 | | | | |
| | 2 | 10.152 | | | | |

① CES 9/6/10 T.E.

| | | | |
|---|---|---|---|
| Prepared By: | CES | 8/23/10 | 2000 |
| Analyzes By: | CES | 8/24/10 | |
| Reviewed By: | | | |

Page of S2EXTBNCH

Columbia Analytical Services

**Preparation Information Benchsheet**

**Prep Run**: 118940
**Team**: GenChem
**Analyst**: CS
**Prep Workflow**: GenDistAS_AIS14
**Prep Method**: EPA 9030B Modified
**Rush/NPDES**: N/A
**Status**: Prepped
**Current Step**: Distillation
**Prep Date**: 08/23/2010 20:00
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1009429-02 | Method Blank | | 10.0 g | 40 mL | | | |
| KQ1009429-01 | Lab Control Sample | | 10.0 g | 40 mL | | | |
| K1008857-001 | LPRC07C | .05 | 10.188 g | 40 mL | | | |
| K1008857-001: KQ1009429-03 | Duplicate | .05 | 10.175 g | 40 mL | | | |
| K1008857-001: KQ1009429-04 | Matrix Spike | .05 | 10.053 g | 40 mL | | | |
| K1008857-001: KQ1009429-05 | Duplicate Matrix Spike | .05 | 10.322 g | 40 mL | | | |
| K1008857-002 | LPRC13A | .05 | 10.152 g | 40 mL | | | |

7 Total Samples consisting of 2 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 23-AUG-10 20:00 | 23-AUG-10 23:30 | CS | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

Work Request # Original (K8534) K8580 K8833 K8857 K8881 K8929 K8875

Tier: I I I V V I

Date Analyzed: 8-23-10 + 8-24-10

Analyst: A Chadhary

Analysis: TKN ASTM 1426-93 B

Only Water Samples associated with these SR's

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

**COMMENTS:**

Final Approved by: MIS Date: 8/26/10

DOREPORT

# Analytical Results Summary

**ıstrument Name:** K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 214092 **Method/Testcode:** ASTM D1426-93B/TKN

| ) Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| )08336-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 3.60 mg/L | 25 mL | 7.20 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| )08336-002 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 3.42 mg/L | 25 mL | 6.84 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| )08580-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 4.93 mg/L | 25 mL | 9.86 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| )08833-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 95.00 mg/L | 25 mL | 950 mg/L | 5 | 0.4 | 1.0 | | | 8/24/10 12:00:00 | N | I |
| )08857-003 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 0.28 mg/L | 25 mL | 0.55 mg/L B | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | V |
| )08881-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 7.60 mg/L | 25 mL | 15.2 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| )08929-002 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 3.05 mg/L | 25 mL | 6.10 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008679-01 | Nitrogen, Total Kjeldahl (TKN) | LCS | | Water | 4.74 mg/L | 25 mL | 9.48 mg/L | 1 | 0.08 | 0.20 | 110 | | 8/24/10 12:00:00 | N | I |
| 1008679-02 | Nitrogen, Total Kjeldahl (TKN) | MB | | Water | 0.11 mg/L | ~~25 mL~~ 50 mL MC 9/28/10 | 0.22 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008679-03 | Nitrogen, Total Kjeldahl (TKN) | DUP | K1008857-003 | Water | 0.29 mg/L | 25 mL | 0.57 mg/L | 1 | 0.08 | 0.20 | | 4 | 8/24/10 12:00:00 | N | I |
| 1008679-04 | Nitrogen, Total Kjeldahl (TKN) | MS | K1008857-003 | Water | 9.80 mg/L | 25 mL | 19.6 mg/L | 1 | 0.08 | 0.20 | 95 | | 8/24/10 12:00:00 | N | I |
| 1008679-05 | Nitrogen, Total Kjeldahl (TKN) | DMS | K1008857-003 | Water | 21.40 mg/L | 25 mL | 42.8 mg/L | 1 | 0.08 | 0.20 | 106 | 74* | 8/24/10 12:00:00 | N | I |
| 1008796-01 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.00 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-02 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-03 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.01 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-04 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-05 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.03 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-06 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-07 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | I |
| 1008796-08 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.78 mg/L | mL | 9.78 mg/L | 1 | 0.08 | 0.20 | 98% | | 8/24/10 12:00:00 | N | I |
| 1008796-09 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 10.90 mg/L | mL | 10.9 mg/L | 1 | 0.08 | 0.20 | 109% | | 8/24/10 12:00:00 | N | I |
| 1008796-10 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.08 mg/L | mL | 9.08 mg/L | 1 | 0.08 | 0.20 | 91% | | 8/24/10 12:00:00 | N | I |
| 1008796-11 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.65 mg/L | mL | 9.65 mg/L | 1 | 0.08 | 0.20 | 97% | | 8/24/10 12:00:00 | N | I |
| 1008796-12 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.20 mg/L | mL | 9.20 mg/L | 1 | 0.08 | 0.20 | 92% | | 8/24/10 12:00:00 | N | I |
| 1008796-13 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.20 mg/L | mL | 9.20 mg/L | 1 | 0.08 | 0.20 | 92% | | 8/24/10 12:00:00 | N | I |
| 1008796-14 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.39 mg/L | mL | 9.39 mg/L | 1 | 0.08 | 0.20 | 94% | | 8/24/10 12:00:00 | N | I |

ıdicates Final Result is not yet adjusted for Solids because it has not yet been determined.

160

# Analytical Results Summary

**nstrument Name:** K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 214099 **Method/Testcode:** ASTM D1426-93B/TKN

| b Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 008875-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Water | 0.24 mg/L | 25 mL | 0.48 mg/L | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008798-01 | Nitrogen, Total Kjeldahl (TKN) | LCS | | Water | 4.26 mg/L | 25 mL | 8.52 mg/L | 1 | 0.08 | 0.20 | 99 | | 8/24/10 12:00:00 | N | II |
| )1008798-02 | Nitrogen, Total Kjeldahl (TKN) | MB | | Water | 0.12 mg/L | 50 mL | 0.12 mg/L J | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008798-03 | Nitrogen, Total Kjeldahl (TKN) | DUP | K1008875-001 | Water | 0.23 mg/L | 25 mL | 0.46 mg/L | 1 | 0.08 | 0.20 | | 4 | 8/24/10 12:00:00 | N | II |
| )1008798-04 | Nitrogen, Total Kjeldahl (TKN) | MS | K1008875-001 | Water | 9.80 mg/L | 25 mL | 19.6 mg/L | 1 | 0.08 | 0.20 | 96 | | 8/24/10 12:00:00 | N | II |
| )1008798-05 | Nitrogen, Total Kjeldahl (TKN) | DMS | K1008875-001 | Water | 20.00 mg/L | 25 mL | 40.0 mg/L | 1 | 0.08 | 0.20 | 99 | 68* | 8/24/10 12:00:00 | N | II |
| )1008799-01 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.00 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-02 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-03 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.01 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-04 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-05 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.03 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-06 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-07 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Water | 0.04 mg/L | mL | 0.20 mg/L U | 1 | 0.08 | 0.20 | | | 8/24/10 12:00:00 | N | II |
| )1008799-08 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.78 mg/L | mL | 9.78 mg/L | 1 | 0.08 | 0.20 | 98% | | 8/24/10 12:00:00 | N | II |
| )1008799-09 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 10.90 mg/L | mL | 10.9 mg/L | 1 | 0.08 | 0.20 | 109% | | 8/24/10 12:00:00 | N | II |
| )1008799-10 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.08 mg/L | mL | 9.08 mg/L | 1 | 0.08 | 0.20 | 91% | | 8/24/10 12:00:00 | N | II |
| )1008799-11 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.65 mg/L | mL | 9.65 mg/L | 1 | 0.08 | 0.20 | 97% | | 8/24/10 12:00:00 | N | II |
| )1008799-12 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.20 mg/L | mL | 9.20 mg/L | 1 | 0.08 | 0.20 | 92% | | 8/24/10 12:00:00 | N | II |
| )1008799-13 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.20 mg/L | mL | 9.20 mg/L | 1 | 0.08 | 0.20 | 92% | | 8/24/10 12:00:00 | N | II |
| )1008799-14 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Water | 9.39 mg/L | mL | 9.39 mg/L | 1 | 0.08 | 0.20 | 94% | | 8/24/10 12:00:00 | N | II |

161

ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117913
**Team**: GenChem
**Analyst**: ac

**Prep Workflow**: Gen Dist TKN
**Prep Method**: ASTM D 3590-89B-21.1
**Rush/NPDES**: NPDES

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/23/2010 10:50
**Due Date**: 08/24/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| K1008336-001 | 2010-08-06-F | .01 | 25 mL | 50 mL | | | |
| K1008336-002 | 2010-08-06-G | .01 | 25 mL | 50 mL | | | |
| K1008580-001 | Effluent Comp | .01 | 25 mL | 50 mL | | | |
| K1008833-001 | D.E.Q 3rd Week | .02 | 25 mL | 50 mL | | | |
| K1008857-003 | LPRC07C-RB | .01 | 25 mL | 50 mL | | | |
| K1008881-001 | Effluent Comp | .01 | 25 mL | 50 mL | | | |
| K1008929-002 | 2010-08-19-F | .01 | 25 mL | 50 mL | | | |
| KQ1008679-01 | Lab Control Sample | | 25 mL | 50 mL | 25 mL | 20577 | |
| KQ1008679-02 | Method Blank | | 25 mL | 50 mL | | | |
| K1008857-003: KQ1008679-03 | Duplicate | .01 | 25 mL | 50 mL | | | |
| K1008857-003: KQ1008679-04 | Matrix Spike | .01 | 25 mL | 50 mL | 0.5 mL | 19233 | |
| K1008857-003: KQ1008679-05 | Duplicate Matrix Spike | .01 | 25 mL | 50 mL | 1 mL | 19233 | |

12 Total Samples consisting of 7 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

B857-3MS = 0.5 mL x 1,000 µg/mL / 25 = 20
B857-3MSD = 1.0 mL x 1,000 µg/mL / 25 = 40

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| 1000 mg/L TKN Solution | Spike | 19233 | 1/7/2011 | TKN LCS mg/L | Spike | 20577 | 2/9/2011 |
| NH3/3-1-F | | | | NH3/3-51-P | | | |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| | 23-AUG-10 | 23-AUG-10 | | | | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118085
**Team**: GenChem
**Analyst**: ac

**Prep Workflow**: Gen Dist TKN
**Prep Method**: ASTM D 3590-89B-21.1
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/24/2010 08:30
**Due Date**: 09/05/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| K1008875-001 | 2010818001 | .02 | 25 mL | 50 mL | | | |
| KQ1008798-01 | Lab Control Sample | | 25 mL | 50 mL | 25 mL | 20577 | |
| KQ1008798-02 | Method Blank | | 50 mL | 50 mL | | | |
| K1008875-001: KQ1008798-03 | Duplicate | .02 | 25 mL | 50 mL | | | |
| K1008875-001: KQ1008798-04 | Matrix Spike | .02 | 25 mL | 50 mL | 0.5 mL | 19233 | |
| K1008875-001: KQ1008798-05 | Duplicate Matrix Spike | .02 | 25 mL | 50 mL | 1 mL | 19233 | |

6 Total Samples consisting of 1 Client Sample, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

8875 MS = 0.5mL x 1,000 ppm / 25 = 20
8875 MSD = 1.0mL x 1,000 ppm / 25 = 40

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| 1000 mg/L TKN Solution | Spike | 19233 | 1/7/2011 | TKN LCS mg/L | Spike | 20577 | 2/9/2011 |
| NH3/3-1-I | | | | NH3/3-51-P | | | |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 24-AUG-10 08:30 | 24-AUG-10 11:00 | ac | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 28.5 | | 0.600 | 1000 | 50 | 50 | 11.4 | 11.400 | 1.00 | 11.400 | 95 |
| ICB | 149.1 | 0.1 | 0.500 | 10 | 50 | 50 | 0.126 | 0.026 | 1.00 | 0.026 | |
| CCV1 | 36 | | 0.500 | 1000 | 50 | 50 | 9.78 | 9.780 | 1.00 | 9.780 | 98 |
| CCB1 | 150.5 | 0.1 | 0.500 | 10 | 50 | 50 | 0.103 | 0.003 | 1.00 | 0.003 | |
| MB | 142.8 | | 0.500 | 10 | 25 | 25 | 0.11 | 0.110 | 1.00 | 0.110 | |
| LCS | 48.5 | | 0.500 | 1000 | 25 | 25 | 4.74 | 4.740 | 1.00 | 4.740 | |
| K1008857-003 | 136.5 | | 0.500 | 10 | 25 | 25 | 0.277 | 0.277 | 1.00 | 0.277 | |
| K1008857-003d | 139.6 | | 0.500 | 10 | 25 | 25 | 0.287 | 0.287 | 1.00 | 0.287 | |
| K1008857-003ms | 33.7 | | 0.500 | 1000 | 25 | 25 | 9.8 | 9.800 | 1.00 | 9.800 | |
| K1008857-003 | 13 | | 2.500 | 1000 | 25 | 25 | 21.4 | 21.400 | 1.00 | 21.400 | |
| K1008336-001 | 49.9 | | 0.500 | 1000 | 25 | 25 | 3.6 | 3.600 | 1.00 | 3.600 | |
| K1008336-002 | 54 | | 0.500 | 1000 | 25 | 25 | 3.42 | 3.420 | 1.00 | 3.420 | |
| K1008580-001 | 34.4 | | 0.500 | 1000 | 25 | 25 | 4.93 | 4.930 | 1.00 | 4.930 | |
| K1008833-001 | 11.6 | | 2.500 | 1000 | 5 | 25 | 19 | 19.000 | 5.00 | 95.000 | |
| CCV2 | 30 | | 0.500 | 1000 | 50 | 50 | 10.9 | 10.900 | 1.00 | 10.900 | 109 |
| CCB2 | 141.2 | 0.1 | 0.500 | 10 | 50 | 50 | 0.137 | 0.037 | 1.00 | 0.037 | |
| K1008881-001 | 32.9 | | 0.500 | 1000 | 25 | 25 | 7.6 | 7.600 | 1.00 | 7.600 | |
| K1008929-002 | 44.1 | | 0.500 | 1000 | 25 | 25 | 3.05 | 3.050 | 1.00 | 3.050 | |
| MB | 139.6 | | 0.500 | 10 | 25 | 25 | 0.124 | 0.124 | 1.00 | 0.124 | |
| LCS | 90.4 | | 0.500 | 1000 | 25 | 25 | 4.26 | 4.260 | 1.00 | 4.260 | OK |
| K1008875-001 | 133.2 | 0.1 | 0.500 | 10 | 25 | 25 | 0.339 | 0.239 | 1.00 | 0.239 | |
| K1008875-001d | 131.2 | 0.1 | 0.500 | 10 | 25 | 25 | 0.33 | 0.230 | 1.00 | 0.230 | |
| K1008875-001ms | 41.1 | | 0.500 | 1000 | 25 | 25 | 9.8 | 9.800 | 1.00 | 9.800 | |
| K1008875-001msd | 24.9 | | 0.500 | 1000 | 25 | 25 | 20 | 20.000 | 1.00 | 20.000 | |
| LCS-SOIL | 46.6 | | 0.500 | 1000 | 25 | 25 | 5.48 | 5.480 | 1.00 | 5.480 | |
| K1008685-001 | 39.1 | | 0.500 | 1000 | 25 | 25 | 8.17 | 8.170 | 1.00 | 8.170 | |

0.1ppm=139.9 1ppm=83.1 10ppm=26.3 100ppm=-30.5 Slope=-56.80

%Eff=96.0

ICV True Value=12.0ppm (0.6ml*1000ppm/50ml) ID# NH3/3-83-H

CCV True Value=10.0ppm (0.5ml*1000ppm/50ml) ID# NH3/3-22-G

NaOH ID# NH3/3-62-F 10000ppm ID# NH3/3-5-N

EDTA buff ID# NH3/3-70-B 1000ppm ID# NH3/3-7-X

LCS: ID# NH3/3-51-P TV.=8.58mg/L %REC=110.99

LCS-SOIL APG#542 LOT#DO65-542 ID#PO3/3-71-A TV=822mg/kg %Rec=110.106

Probe ID#GEN-ISE-01 A DATE TIME

| | | | |
|---|---|---|---|
| Analyzed By:AC | Date Analyzed: | 8/24/2010 | 12:00:00 PM |
| Reviewed By: | Date Reviewed: | 8/26/10 | |

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV3 | 57.2 | | 0.500 | 1000 | 50 | 50 | 9.08 | 9.080 | 1.00 | 9.080 | 91 |
| CCB3 | 171 | 0.1 | 0.500 | 10 | 50 | 50 | 0.11 | 0.010 | 1.00 | 0.010 | |
| 1008685-001d | 35.9 | | 0.500 | 1000 | 25 | 25 | 7.53 | 7.530 | 1.00 | 7.530 | |
| 008685-001ms | 4.1 | | 2.500 | 1000 | 25 | 25 | 41.1 | 41.100 | 1.00 | 41.100 | |
| 008685-001msd | 1.1 | | 2.500 | 1000 | 25 | 25 | 61.3 | 61.300 | 1.00 | 61.300 | |
| 1008685-002 | 52.8 | | 0.500 | 1000 | 25 | 25 | 6.44 | 6.440 | 1.00 | 6.440 | |
| 1008685-003 | 54.1 | | 0.500 | 1000 | 25 | 25 | 7.07 | 7.070 | 1.00 | 7.070 | |
| 1008685-004 | 50.3 | | 0.500 | 1000 | 25 | 25 | 8.3 | 8.300 | 1.00 | 8.300 | |
| 1008685-005 | 54.3 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| 1008685-006 | 58.1 | | 0.500 | 1000 | 25 | 25 | 8.21 | 8.210 | 1.00 | 8.210 | |
| CCV4 | 45.3 | | 0.500 | 1000 | 50 | 50 | 9.65 | 9.650 | 1.00 | 9.650 | 97 |
| CCB4 | 154.4 | 0.1 | 0.500 | 10 | 50 | 50 | 0.143 | 0.043 | 1.00 | 0.043 | |
| 1008685-007 | 34.3 | | 0.500 | 1000 | 25 | 25 | 8.02 | 8.020 | 1.00 | 8.020 | |
| 1008685-008 | 37.6 | | 0.500 | 1000 | 25 | 25 | 7.67 | 7.670 | 1.00 | 7.670 | |
| 1008685-009 | 48.2 | | 0.500 | 1000 | 25 | 25 | 7.64 | 7.640 | 1.00 | 7.640 | |
| 1008685-010 | 47.1 | | 0.500 | 1000 | 25 | 25 | 9.41 | 9.410 | 1.00 | 9.410 | |
| 1008685-011 | 51.6 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| 1008685-012 | 49.1 | | 0.500 | 1000 | 25 | 25 | 9.03 | 9.030 | 1.00 | 9.030 | |
| 1008685-013 | 50.6 | | 0.500 | 1000 | 25 | 25 | 10.7 | 10.700 | 1.00 | 10.700 | |
| 1008685-014 | 36.7 | | 0.500 | 1000 | 25 | 25 | 11.5 | 11.500 | 1.00 | 11.500 | |
| 1008685-015 | 53.3 | | 0.500 | 1000 | 25 | 25 | 7.64 | 7.640 | 1.00 | 7.640 | |
| 1008685-016 | 72.8 | | 0.500 | 100 | 25 | 25 | 7.51 | 7.510 | 1.00 | 7.510 | |
| CCV5 | 45.2 | | 0.500 | 1000 | 50 | 50 | 9.2 | 9.200 | 1.00 | 9.200 | 92 |
| CCB5 | 154.8 | 0.1 | 0.500 | 10 | 50 | 50 | 0.129 | 0.029 | 1.00 | 0.029 | |

MS

8-24-10 DATE 1200 TIME

8/24/10

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008685-01 7 | 39.9 | | 0.500 | 1000 | 25 | 25 | 7.79 | 7.790 | 1.00 | 7.790 | |
| 1008685-01 9 | 40.8 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| 1008685-01 H | 39.2 | | 0.500 | 1000 | 25 | 25 | 9.08 | 9.080 | 1.00 | 9.080 | |
| 1008685-02 D | 61.9 | | 2.500 | 100 | 25 | 25 | 4.84 | 4.840 | 1.00 | 4.840 | |
| MB | 143.8 | | 0.500 | 10 | 25 | 25 | 0.143 | 0.143 | 1.00 | 0.143 | |
| LCS-SOIL | 52.8 | | 0.500 | 1000 | 25 | 25 | 5.24 | 5.240 | 1.00 | 5.240 | |
| 1008857-00 1 | 60.4 | | 2.500 | 100 | 25 | 25 | 7.66 | 7.660 | 1.00 | 7.660 | |
| 1008857-00 2 | 53.9 | | 0.500 | 1000 | 25 | 25 | 5.19 | 5.190 | 1.00 | 5.190 | |
| 1008857-002 d | 54.2 | | 0.500 | 1000 | 25 | 25 | 5.12 | 5.120 | 1.00 | 5.120 | |
| 008857-002 ms | 17.7 | | 0.500 | 1000 | 25 | 25 | 40.2 | 40.200 | 1.00 | 40.200 | |
| CCV6 | 39.5 | | 0.500 | 1000 | 50 | 50 | 9.2 | 9.200 | 1.00 | 9.200 | 92 |
| CCB6 | 154.1 | 0.1 | 0.500 | 10 | 50 | 50 | 0.143 | 0.043 | 1.00 | 0.043 | |
| 008857-002 msd | -23.2 | | 5.000 | 1000 | 25 | 25 | 60.3 | 60.300 | 1.00 | 60.300 | |
| CCV7 | 52.7 | | 0.500 | 1000 | 50 | 50 | 9.39 | 9.390 | 1.00 | 9.390 | 94 |
| CCB7 | 160.5 | 0.1 | 0.500 | 10 | 50 | 50 | 0.141 | 0.041 | 1.00 | 0.041 | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| CCV7 | | | 0.500 | 1000 | 50 | 50 | | 0.000 | 1.00 | 0.000 | 0 |
| CCB7 | | 0.1 | 0.500 | 10 | 50 | 50 | | -0.100 | 1.00 | -0.100 | |

AC 8-24-10 1200

DATE TIME

# Analytical Results Summary

**Instrument Name:** K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 214134 **Method/Testcode:** ASTM D1426-93B Modified/TKN

| ab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008685-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 8.17 mg/L | 1330.62 | 3500 mg/Kg | 1 | 30 | 100 | | | 8/24/10 12:00:00 | N | V |
| 1008685-002 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 6.44 mg/L | 1073.33 | 2720 mg/Kg | 1 | 30 | 100 | | | 8/24/10 12:00:00 | N | V |
| 1008685-003 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.07 mg/L | 1111.64 | 3220 mg/Kg | 1 | 30 | 110 | | | 8/24/10 12:00:00 | N | V |
| 1008685-004 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 8.30 mg/L | 1330.13 | 3450 mg/Kg | 1 | 20 | 100 | | | 8/24/10 12:00:00 | N | V |
| 1008685-005 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.86 mg/L | 1239.75 | 3150 mg/Kg | 1 | 20 | 96 | | | 8/24/10 12:00:00 | N | V |
| 1008685-006 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 8.21 mg/L | 1290.88 | 3710 mg/Kg | 1 | 30 | 110 | | | 8/24/10 12:00:00 | N | V |
| 1008685-007 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 8.02 mg/L | 1336.67 | 3330 mg/Kg | 1 | 20 | 100 | | | 8/24/10 12:00:00 | N | V |
| 1008685-008 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.67 mg/L | 1245.13 | 4260 mg/Kg | 1 | 30 | 130 | | | 8/24/10 12:00:00 | N | V |
| 1008685-009 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.64 mg/L | 1273.33 | 3670 mg/Kg | 1 | 30 | 120 | | | 8/24/10 12:00:00 | N | V |
| 1008685-010 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 9.41 mg/L | 1557.95 | 4290 mg/Kg | 1 | 30 | 110 | | | 8/24/10 12:00:00 | N | V |
| 1008685-011 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.86 mg/L | 1288.52 | 3530 mg/Kg | 1 | 30 | 110 | | | 8/24/10 12:00:00 | N | V |
| 1008685-012 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 9.03 mg/L | 1500.00 | 4450 mg/Kg | 1 | 30 | 120 | | | 8/24/10 12:00:00 | N | V |
| 1008685-013 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 10.70 mg/L | 1783.33 | 5890 mg/Kg | 1 | 30 | 130 | | | 8/24/10 12:00:00 | N | V |
| 1008685-014 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 11.50 mg/L | 1897.69 | 6710 mg/Kg | 1 | 30 | 140 | | | 8/24/10 12:00:00 | N | V |
| 1008685-015 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.64 mg/L | 1244.30 | 3710 mg/Kg | 1 | 30 | 120 | | | 8/24/10 12:00:00 | N | V |
| 1008685-016 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.51 mg/L | 1180.82 | 1730 mg/Kg | 1 | 12 | 55 | | | 8/24/10 12:00:00 | N | V |
| 1008685-017 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.79 mg/L | 1294.02 | 4150 mg/Kg | 1 | 30 | 130 | | | 8/24/10 12:00:00 | N | V |
| 1008685-018 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.86 mg/L | 1301.32 | 3700 mg/Kg | 1 | 30 | 110 | | | 8/24/10 12:00:00 | N | V |
| 1008685-019 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 9.08 mg/L | 1418.75 | 3940 mg/Kg | 1 | 30 | 100 | | | 8/24/10 12:00:00 | N | V |
| 1008685-020 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 4.84 mg/L | 778.14 | 1460 mg/Kg | 1 | 15 | 72 | | | 8/24/10 12:00:00 | N | V |
| Q1008808-01 | Nitrogen, Total Kjeldahl (TKN) | LCS | | Sediment | 5.48 mg/L | 904.29 | 904 mg/Kg | 1 | 8 | 40 | 110 | | 8/24/10 12:00:00 | N | V |
| Q1008808-02 | Nitrogen, Total Kjeldahl (TKN) | MB | | Sediment | 0.12 mg/L | 20.67 | 21 mg/Kg J | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008808-03 | Nitrogen, Total Kjeldahl (TKN) | DUP | K1008685-001 | Sediment | 7.53 mg/L | 1246.69 | 3280 mg/Kg | 1 | 30 | 100 | | 7 | 8/24/10 12:00:00 | N | V |
| Q1008808-04 | Nitrogen, Total Kjeldahl (TKN) | MS | K1008685-001 | Sediment | 41.10 mg/L | 6850.00 | 18000 mg/Kg | 1 | 30 | 110 | 166 | | 8/24/10 12:00:00 | N | V |
| Q1008808-05 | Nitrogen, Total Kjeldahl (TKN) | DMS | K1008685-001 | Sediment | 61.30 mg/L | 10115.51 | 26600 mg/Kg | 1 | 30 | 100 | 133 | 22* | 8/24/10 12:00:00 | N | V |
| Q1008817-01 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.00 mg/L | 0.50 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |

Data was re-printed on 9/29/10. Initially turned in and reviewed by HJ or MS.

Not adjusted for changes in units

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

167

# Analytical Results Summary

**Instrument Name:** K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 214134 **Method/Testcode:** ASTM D1426-93B Modified/TKN

| ab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q1008817-02 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 6.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-03 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.01 mg/L | 1.67 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-04 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 7.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-05 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.03 mg/L | 4.83 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-06 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 7.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-07 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 6.83 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-08 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.78 mg/L | 1630.00 | 9.78 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-09 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 10.90 mg/L | 1816.67 | 10.9 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-10 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.08 mg/L | 1513.33 | 9.08 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-11 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.65 mg/L | 1608.33 | 9.65 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-12 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.20 mg/L | 1533.33 | 9.20 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-13 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.20 mg/L | 1533.33 | 9.20 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008817-14 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.39 mg/L | 1565.00 | 9.39 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |

168

Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 214143 **Method/Testcode:** ASTM D1426-93B Modified/TKN

| ab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | As Received* | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008857-001 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 7.66 mg/L | 1235.48 | 1870 mg/Kg | 1 | 12 | 59 | | | 8/24/10 12:00:00 | N | V |
| 1008857-002 | Nitrogen, Total Kjeldahl (TKN) | N/A | | Sediment | 5.19 mg/L | 837.10 | 1150 mg/Kg | 1 | 11 | 53 | | | 8/24/10 12:00:00 | N | V |
| Q1008811-01 | Nitrogen, Total Kjeldahl (TKN) | LCS | | Sediment | 5.24 mg/L | 873.33 | 873 mg/Kg | 1 | 8 | 40 | 106 | | 8/24/10 12:00:00 | N | V |
| Q1008811-02 | Nitrogen, Total Kjeldahl (TKN) | MB | | Sediment | 0.14 mg/L | 23.83 | 24 mg/Kg J | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008811-03 | Nitrogen, Total Kjeldahl (TKN) | DUP | K1008857-002 | Sediment | 5.12 mg/L | 817.89 | 1120 mg/Kg | 1 | 11 | 53 | | 2 | 8/24/10 12:00:00 | N | V |
| Q1008811-04 | Nitrogen, Total Kjeldahl (TKN) | MS | K1008857-002 | Sediment | 40.20 mg/L | 6700.00 | 9190 mg/Kg | 1 | 11 | 55 | 176* | | 8/24/10 12:00:00 | N | V |
| Q1008811-05 | Nitrogen, Total Kjeldahl (TKN) | DMS | K1008857-002 | Sediment | 60.30 mg/L | 9852.94 | 13500 mg/Kg | 1 | 11 | 54 | 138 | 24* | 8/24/10 12:00:00 | N | V |
| Q1008818-01 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.00 mg/L | 0.50 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-02 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 6.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-03 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.01 mg/L | 1.67 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-04 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 7.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-05 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.03 mg/L | 4.83 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-06 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 7.17 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-07 | Nitrogen, Total Kjeldahl (TKN) | CCB | | Sediment | 0.04 mg/L | 6.83 | 40 mg/Kg U | 1 | 40 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-08 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.78 mg/L | 1630.00 | 9.78 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-09 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 10.90 mg/L | 1816.67 | 10.9 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-10 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.08 mg/L | 1513.33 | 9.08 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-11 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.65 mg/L | 1608.33 | 9.65 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-12 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.20 mg/L | 1533.33 | 9.20 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-13 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.20 mg/L | 1533.33 | 9.20 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |
| Q1008818-14 | Nitrogen, Total Kjeldahl (TKN) | CCV | | Sediment | 9.39 mg/L | 1565.00 | 9.39 mg/Kg | 1 | 8 | 40 | | | 8/24/10 12:00:00 | N | V |

169

Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 28.5 | | 0.600 | 1000 | 50 | 50 | 11.4 | 11.400 | 1.00 | 11.400 | 95 |
| ICB | 149.1 | 0.1 | 0.500 | 10 | 50 | 50 | 0.126 | 0.026 | 1.00 | 0.026 | |
| CCV1 | 36 | | 0.500 | 1000 | 50 | 50 | 9.78 | 9.780 | 1.00 | 9.780 | 98 |
| CCB1 | 150.5 | 0.1 | 0.500 | 10 | 50 | 50 | 0.103 | 0.003 | 1.00 | 0.003 | |
| MB | 142.8 | | 0.500 | 10 | 25 | 25 | 0.11 | 0.110 | 1.00 | 0.110 | |
| LCS | 48.5 | | 0.500 | 1000 | 25 | 25 | 4.74 | 4.740 | 1.00 | 4.740 | |
| K1008857-003 | 136.5 | | 0.500 | 10 | 25 | 25 | 0.277 | 0.277 | 1.00 | 0.277 | |
| K1008857-003d | 139.6 | | 0.500 | 10 | 25 | 25 | 0.287 | 0.287 | 1.00 | 0.287 | |
| K1008857-003ms | 33.7 | | 0.500 | 1000 | 25 | 25 | 9.8 | 9.800 | 1.00 | 9.800 | |
| K1008857-003 | 13 | | 2.500 | 1000 | 25 | 25 | 21.4 | 21.400 | 1.00 | 21.400 | |
| K1008336-001 | 49.9 | | 0.500 | 1000 | 25 | 25 | 3.6 | 3.600 | 1.00 | 3.600 | |
| K1008336-002 | 54 | | 0.500 | 1000 | 25 | 25 | 3.42 | 3.420 | 1.00 | 3.420 | |
| K1008580-001 | 34.4 | | 0.500 | 1000 | 25 | 25 | 4.93 | 4.930 | 1.00 | 4.930 | |
| K1008833-001 | 11.6 | | 2.500 | 1000 | 5 | 25 | 19 | 19.000 | 5.00 | 95.000 | |
| CCV2 | 30 | | 0.500 | 1000 | 50 | 50 | 10.9 | 10.900 | 1.00 | 10.900 | 109 |
| CCB2 | 141.2 | 0.1 | 0.500 | 10 | 50 | 50 | 0.137 | 0.037 | 1.00 | 0.037 | |
| K1008881-001 | 32.9 | | 0.500 | 1000 | 25 | 25 | 7.6 | 7.600 | 1.00 | 7.600 | |
| K1008929-002 | 44.1 | | 0.500 | 1000 | 25 | 25 | 3.05 | 3.050 | 1.00 | 3.050 | |
| MB | 139.6 | | 0.500 | 10 | 25 | 25 | 0.124 | 0.124 | 1.00 | 0.124 | |
| LCS | 90.4 | | 0.500 | 1000 | 25 | 25 | 4.26 | 4.260 | 1.00 | 4.260 | |
| K1008875-001 | 133.2 | 0.1 | 0.500 | 10 | 25 | 25 | 0.339 | 0.239 | 1.00 | 0.239 | |
| K1008875-001d | 131.2 | 0.1 | 0.500 | 10 | 25 | 25 | 0.33 | 0.230 | 1.00 | 0.230 | |
| K1008875-001ms | 41.1 | | 0.500 | 1000 | 25 | 25 | 9.8 | 9.800 | 1.00 | 9.800 | |
| K1008875-001msd | 24.9 | | 0.500 | 1000 | 25 | 25 | 20 | 20.000 | 1.00 | 20.000 | |
| LCS-SOIL | 46.6 | | 0.500 | 1000 | 25 | 25 | 5.48 | 5.480 | 1.00 | 5.480 | |
| K1008685-001 | 39.1 | | 0.500 | 1000 | 25 | 25 | 8.17 | 8.170 | 1.00 | 8.170 | |

0.1ppm=139.9 1ppm=83.1 10ppm=26.3 100ppm=-30.5 Slope=-56.80

%Eff=96.0

ICV True Value=12.0ppm (0.6ml*1000ppm/50ml) ID# NH3/3-83-H

CCV True Value=10.0ppm (0.5ml*1000ppm/50ml) ID# NH3/3-22-G

NaOH ID# NH3/3-62-F 10000ppm ID# NH3/3-5-N

EDTA buff ID# NH3/3-70-B 1000ppm ID# NH3/3-7-X

LCS: ID# NH3/3-51-P TV.=8.58mg/L %REC=110,99

LCS-SOIL APG#542 LOT#DO65-542 ID#PO3/3-71-A TV=822mg/kg %Rec=110,106

Probe ID#GEN-ISE-01 A DATE TIME

| | | | |
|---|---|---|---|
| Analyzed By:AC | Date Analyzed: | 8/24/2010 | 12:00:00 PM |
| Reviewed By: | Date Reviewed: | 9/29/10 | |

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV3 | 57.2 | | 0.500 | 1000 | 50 | 50 | 9.08 | 9.080 | 1.00 | 9.080 | 91 |
| CCB3 | 171 | 0.1 | 0.500 | 10 | 50 | 50 | 0.11 | 0.010 | 1.00 | 0.010 | |
| K1008685-001d | 35.9 | | 0.500 | 1000 | 25 | 25 | 7.53 | 7.530 | 1.00 | 7.530 | |
| K1008685-001ms | 4.1 | | 2.500 | 1000 | 25 | 25 | 41.1 | 41.100 | 1.00 | 41.100 | |
| K1008685-001msd | 1.1 | | 2.500 | 1000 | 25 | 25 | 61.3 | 61.300 | 1.00 | 61.300 | |
| K1008685-002 | 52.8 | | 0.500 | 1000 | 25 | 25 | 6.44 | 6.440 | 1.00 | 6.440 | |
| K1008685-003 | 54.1 | | 0.500 | 1000 | 25 | 25 | 7.07 | 7.070 | 1.00 | 7.070 | |
| K1008685-004 | 50.3 | | 0.500 | 1000 | 25 | 25 | 8.3 | 8.300 | 1.00 | 8.300 | |
| K1008685-005 | 54.3 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| K1008685-006 | 58.1 | | 0.500 | 1000 | 25 | 25 | 8.21 | 8.210 | 1.00 | 8.210 | |
| CCV4 | 45.3 | | 0.500 | 1000 | 50 | 50 | 9.65 | 9.650 | 1.00 | 9.650 | 97 |
| CCB4 | 154.4 | 0.1 | 0.500 | 10 | 50 | 50 | 0.143 | 0.043 | 1.00 | 0.043 | |
| K1008685-007 | 34.3 | | 0.500 | 1000 | 25 | 25 | 8.02 | 8.020 | 1.00 | 8.020 | |
| K1008685-008 | 37.6 | | 0.500 | 1000 | 25 | 25 | 7.67 | 7.670 | 1.00 | 7.670 | |
| K1008685-009 | 48.2 | | 0.500 | 1000 | 25 | 25 | 7.64 | 7.640 | 1.00 | 7.640 | |
| K1008685-010 | 47.1 | | 0.500 | 1000 | 25 | 25 | 9.41 | 9.410 | 1.00 | 9.410 | |
| K1008685-011 | 51.6 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| K1008685-012 | 49.1 | | 0.500 | 1000 | 25 | 25 | 9.03 | 9.030 | 1.00 | 9.030 | |
| K1008685-013 | 50.6 | | 0.500 | 1000 | 25 | 25 | 10.7 | 10.700 | 1.00 | 10.700 | |
| K1008685-014 | 36.7 | | 0.500 | 1000 | 25 | 25 | 11.5 | 11.500 | 1.00 | 11.500 | |
| K1008685-015 | 53.3 | | 0.500 | 1000 | 25 | 25 | 7.64 | 7.640 | 1.00 | 7.640 | |
| K1008685-016 | 72.8 | | 0.500 | 100 | 25 | 25 | 7.51 | 7.510 | 1.00 | 7.510 | |
| CCV5 | 45.2 | | 0.500 | 1000 | 50 | 50 | 9.2 | 9.200 | 1.00 | 9.200 | 92 |
| CCB5 | 154.8 | 0.1 | 0.500 | 10 | 50 | 50 | 0.129 | 0.029 | 1.00 | 0.029 | |

DATE TIME

9/29/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: Analysis Method # ASTM D1426-93B

Analysis: TKN (Total Kjeldahl Nitrogen) Prep. Method # ASTM D3590-89B-21.1

| Sample Number | Initial mV Reading | Initial Spike Level, mg/L | Known Addition Spike, mL | Known Addition Spike, mg/L | Sample Aliquot, mL | Instrument Final Vol. mL | Reading mg/L | Reading less Initial spike mg/L | Calculated Dilution | mg/L in solution | %REC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K1008685-017 | 39.9 | | 0.500 | 1000 | 25 | 25 | 7.79 | 7.790 | 1.00 | 7.790 | |
| K1008685-018 | 40.8 | | 0.500 | 1000 | 25 | 25 | 7.86 | 7.860 | 1.00 | 7.860 | |
| K1008685-019 | 39.2 | | 0.500 | 1000 | 25 | 25 | 9.08 | 9.080 | 1.00 | 9.080 | |
| K1008685-020 | 61.9 | | 2.500 | 100 | 25 | 25 | 4.84 | 4.840 | 1.00 | 4.840 | |
| MB | 143.8 | | 0.500 | 10 | 25 | 25 | 0.143 | 0.143 | 1.00 | 0.143 | |
| LCS-SOIL | 52.8 | | 0.500 | 1000 | 25 | 25 | 5.24 | 5.240 | 1.00 | 5.240 | |
| K1008857-001 | 60.4 | | 2.500 | 100 | 25 | 25 | 7.66 | 7.660 | 1.00 | 7.660 | |
| K1008857-002 | 53.9 | | 0.500 | 1000 | 25 | 25 | 5.19 | 5.190 | 1.00 | 5.190 | |
| K1008857-002d | 54.2 | | 0.500 | 1000 | 25 | 25 | 5.12 | 5.120 | 1.00 | 5.120 | |
| K1008857-002ms | 17.7 | | 0.500 | 1000 | 25 | 25 | 40.2 | 40.200 | 1.00 | 40.200 | |
| CCV6 | 39.5 | | 0.500 | 1000 | 50 | 50 | 9.2 | 9.200 | 1.00 | 9.200 | 92 |
| CCB6 | 154.1 | 0.1 | 0.500 | 10 | 50 | 50 | 0.143 | 0.043 | 1.00 | 0.043 | |
| K1008857-002msd | -23.2 | | 5.000 | 1000 | 25 | 25 | 60.3 | 60.300 | 1.00 | 60.300 | |
| CCV7 | 52.7 | | 0.500 | 1000 | 50 | 50 | 9.39 | 9.390 | 1.00 | 9.390 | 94 |
| CCB7 | 160.5 | 0.1 | 0.500 | 10 | 50 | 50 | 0.141 | 0.041 | 1.00 | 0.041 | |
| | | | | | | | | 0.000 | #DIV/0! | ~~#DIV/0!~~ | |
| | | | | | | | | 0.000 | ~~#DIV/0!~~ | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| | | | | | | | | 0.000 | #DIV/0! | #DIV/0! | |
| CCV7 | | | 0.500 | 1000 | 50 | 50 | | 0.000 | 1.00 | 0.000 | 0 |
| ~~CCB7~~ | | ~~0.1~~ | ~~0.500~~ | ~~10~~ | ~~50~~ | ~~50~~ | | ~~-0.100~~ | ~~1.00~~ | ~~-0.100~~ | |

DATE TIME

9/29/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118094
**Team**: GenChem
**Analyst**: ac

**Prep Workflow**: Gen Dist TKN
**Prep Method**: ASTM D 3590-89B-21.1 Mod
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/24/2010 08:30
**Due Date**: 08/30/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| K1008685-001 | LPRC02A | .02 | 0.307 g | 50 mL | | | |
| K1008685-002 | LPRC03A | .02 | 0.300 g | 50 mL | | | |
| K1008685-003 | LPRC03B | .02 | 0.318 g | 50 mL | | | |
| K1008685-004 | LPRC02B | .02 | 0.312 g | 50 mL | | | |
| K1008685-005 | LPRC04A | .02 | 0.317 g | 50 mL | | | |
| K1008685-006 | LPRC04B | .02 | 0.318 g | 50 mL | | | |
| K1008685-007 | LPRC04C | .02 | 0.300 g | 50 mL | | | |
| K1008685-008 | LPRC04D | .02 | 0.308 g | 50 mL | | | |
| K1008685-009 | LPRC05B | .02 | 0.300 g | 50 mL | | | |
| K1008685-010 | LPRC05A | .02 | 0.302 g | 50 mL | | | |
| K1008685-011 | LPRC05A-FD | .02 | 0.305 g | 50 mL | | | |
| K1008685-012 | LPRC07A | .02 | 0.301 g | 50 mL | | | |
| K1008685-013 | LPRC07B | .02 | 0.300 g | 50 mL | | | |
| K1008685-014 | LPRC07D | .02 | 0.303 g | 50 mL | | | |
| K1008685-015 | LPRC06A | .02 | 0.307 g | 50 mL | | | |
| K1008685-016 | LPRC15A | .02 | 0.318 g | 50 mL | | | |
| K1008685-017 | LPRC08A | .02 | 0.301 g | 50 mL | | | |
| K1008685-018 | LPRC09A | .02 | 0.302 g | 50 mL | | | |
| K1008685-019 | LPRC10A | .02 | 0.320 g | 50 mL | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K1008685-020 | LPRC12A | .02 | 0.311 g | 50 mL | | | |
| KQ1008808-01 | Lab Control Sample | | 0.303 g | 50 mL | 0.303 g | 19073 | |
| KQ1008808-02 | Method Blank | | 0.300 g | 50 mL | | | |
| K1008685-001: KQ1008808-03 | Duplicate | .02 | 0.302 g | 50 mL | | | |
| K1008685-001: KQ1008808-04 | Matrix Spike | .02 | 0.300 g | 50 mL | 1 mL | 19233 | |
| K1008685-001: KQ1008808-05 | Duplicate Matrix Spike | .02 | 0.303 g | 50 mL | 2 mL | 19233 | |

25 Total Samples consisting of 20 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| 1000 mg/L TKN Solution | Spike | 19233 | 1/7/2011 | Nutrients in soil/ TKN, TPhos, C LCS | Spike | 19073 | 1/13/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 24-AUG-10 08:30 | 24-AUG-10 10:00 | ac | | N | |

## Comments

## Review

Reviewed by: _____ Date: 9/29/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118096
**Team**: GenChem
**Analyst**: ac

**Prep Workflow**: Gen Dist TKN
**Prep Method**: ASTM D 3590-89B-21.1 Mod
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Distillation

**Prep Date**: 08/24/2010 08:30
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|
| KQ1008811-02 | Method Blank | | 0.300 g | 50 mL | | | |
| KQ1008811-01 | Lab Control Sample | | 0.300 g | 50 mL | 0.3 g | 19073 | |
| K1008857-001 | LPRC07C | .02 | 0.310 g | 50 mL | | | |
| K1008857-002 | LPRC13A | .02 | 0.310 g | 50 mL | | | |
| K1008857-002: KQ1008811-03 | Duplicate | .02 | 0.313 g | 50 mL | | | |
| K1008857-002: KQ1008811-04 | Matrix Spike | .02 | 0.300 g | 50 mL | 1 mL | 19233 | |
| K1008857-002: KQ1008811-05 | Duplicate Matrix Spike | .02 | 0.306 g | 50 mL | 2 mL | 19233 | |

7 Total Samples consisting of 2 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| 1000 mg/L TKN Solution | Spike | 19233 | 1/7/2011 | Nutrients in soil/ TKN, TPhos, C LCS | Spike | 19073 | 1/13/2011 |

## Preparation Materials

## Preparation Hardware / Equipment

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Distillation | 24-AUG-10 08:30 | 24-AUG-10 11:00 | ac | | N | |

## Comments

## Review

Reviewed by: [signature] Date: 9/29/10

# Metals

# Columbia Analytical Services

## - Cover Page -
## INORGANIC ANALYSIS DATA PACKAGE

**Client:** Winward Environmental, LLC
**Project Name:** Passaic RI/FS Sediment
**Project No.:** Task 18.8.1

**Service Request:** K1008857

| Sample Name: | Lab Code: |
|---|---|
| **LPRC07C** | **K1008857-001** |
| **LPRC07CD** | **K1008857-001D** |
| **LPRC07CS** | **K1008857-001S** |
| **LPRC13A** | **K1008857-002** |
| **Method Blank** | **K1008857-MB** |

**Comments:**

**Approved By:** _____ **Date:** 9/29/10

## Simultaneously Extractable Metals

- 1 -

### INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Winward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | 08/16/10 |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Matrix:** | SEDIMENT | **Units:** | umol/g |
| | | **Basis:** | DRY |

**Sample Name:** LPRC07C **Lab Code:** K1008857-001

| Analyte | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|
| Cadmium | 6010B | 0.0008 | 1.0 | 08/26/10 | 09/11/10 | 0.0015 | | |
| Copper | 6010B | 0.003 | 1.0 | 08/26/10 | 09/11/10 | 0.133 | | |
| Lead | 6010B | 0.004 | 1.0 | 08/26/10 | 09/11/10 | 0.064 | | |
| Nickel | 6010B | 0.006 | 1.0 | 08/26/10 | 09/11/10 | 0.011 | | |
| Silver | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.002 | U | |
| Zinc | 6010B | 0.003 | 1.0 | 08/26/10 | 09/11/10 | 0.381 | | |

**% Solids:** 66.1

Comments:

## Simultaneously Extractable Metals

- 1 -

### INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Winward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | 08/16/10 |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Matrix:** | SEDIMENT | **Units:** | umol/g |
| | | **Basis:** | DRY |

**Sample Name:** LPRC13A **Lab Code:** K1008857-002

| Analyte | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|
| Cadmium | 6010B | 0.0007 | 1.0 | 08/26/10 | 09/11/10 | 0.0035 | | |
| Copper | 6010B | 0.003 | 1.0 | 08/26/10 | 09/11/10 | 0.202 | | |
| Lead | 6010B | 0.004 | 1.0 | 08/26/10 | 09/11/10 | 0.177 | | |
| Nickel | 6010B | 0.006 | 1.0 | 08/26/10 | 09/11/10 | 0.035 | | |
| Silver | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.002 | U | |
| Zinc | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.528 | | |

**% Solids:** 72.9

Comments:

## Simultaneously Extractable Metals

- 1 -

### INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Winward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | |
| **Matrix:** | SEDIMENT | **Units:** | umol/g |
| | | **Basis:** | DRY |

**Sample Name:** Method Blank **Lab Code:** K1008857-MB

| Analyte | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|
| Cadmium | 6010B | 0.0004 | 1.0 | 08/26/10 | 09/11/10 | 0.0004 | U | |
| Copper | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.002 | U | |
| Lead | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.002 | U | |
| Nickel | 6010B | 0.003 | 1.0 | 08/26/10 | 09/11/10 | 0.003 | U | |
| Silver | 6010B | 0.001 | 1.0 | 08/26/10 | 09/11/10 | 0.001 | U | |
| Zinc | 6010B | 0.002 | 1.0 | 08/26/10 | 09/11/10 | 0.002 | U | |

**% Solids:** 100.0

Comments:

# Simultaneously Extractable Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS Mixed

Concentration Units: umol/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Cadmium | 11.10 | 11.15 | 100 | 2.22 | 2.25 | 101 | 2.27 | 102 | 6010B |
| Copper | 9.83 | 10.02 | 102 | 3.93 | 4.00 | 102 | 3.99 | 102 | 6010B |
| Lead | 12.10 | 12.04 | 100 | 1.21 | 1.21 | 100 | 1.22 | 101 | 6010B |
| Nickel | 21.30 | 21.21 | 100 | 4.26 | 4.31 | 101 | 4.35 | 102 | 6010B |
| Silver | 5.79 | 6.03 | 104 | 2.32 | 2.40 | 103 | 2.48 | 107 | 6010B |
| Zinc | 19.10 | 19.06 | 100 | 3.82 | 3.91 | 102 | 4.03 | 105 | 6010B |

# Simultaneously Extractable Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICV Source:** Inorganic Ventures **CCV Source:** CAS Mixed

**Concentration Units:** umol/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Cadmium | | | | 2.22 | 2.24 | 101 | 2.20 | 99 | 6010B |
| Copper | | | | 3.93 | 4.01 | 102 | 3.96 | 101 | 6010B |
| Lead | | | | 1.21 | 1.22 | 101 | 1.19 | 98 | 6010B |
| Nickel | | | | 4.26 | 4.32 | 101 | 4.24 | 100 | 6010B |
| Silver | | | | 2.32 | 2.48 | 107 | 2.49 | 107 | 6010B |
| Zinc | | | | 3.82 | 4.06 | 106 | 3.96 | 104 | 6010B |

# Simultaneously Extractable Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICV Source:** Inorganic Ventures **CCV Source:** CAS Mixed

**Concentration Units:** umol/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Cadmium | | | | 2.22 | 2.21 | 100 | 2.25 | 101 | 6010B |
| Copper | | | | 3.93 | 3.94 | 100 | 4.01 | 102 | 6010B |
| Lead | | | | 1.21 | 1.19 | 98 | 1.22 | 101 | 6010B |
| Nickel | | | | 4.26 | 4.25 | 100 | 4.34 | 102 | 6010B |
| Silver | | | | 2.32 | 2.49 | 107 | 2.51 | 108 | 6010B |
| Zinc | | | | 3.82 | 3.99 | 104 | 4.09 | 107 | 6010B |

# Simultaneously Extractable Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS Mixed

Concentration Units: umol/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Cadmium | | | | 2.22 | 2.24 | 101 | | | 6010B |
| Copper | | | | 3.93 | 3.96 | 101 | | | 6010B |
| Lead | | | | 1.21 | 1.20 | 99 | | | 6010B |
| Nickel | | | | 4.26 | 4.31 | 101 | | | 6010B |
| Silver | | | | 2.32 | 2.47 | 106 | | | 6010B |
| Zinc | | | | 3.82 | 4.07 | 107 | | | 6010B |

# Simultaneously Extractable Metals
## - 2b -
## CRDL STANDARD FOR AA AND ICP

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

Concentration Units: umol/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Cadmium | | | | 0.0440 | 0.0472 | 107 | | |
| Copper | | | | 0.1600 | 0.172 | 108 | | |
| Lead | | | | 0.2400 | 0.242 | 101 | | |
| Nickel | | | | 0.3400 | 0.3468 | 102 | | |
| Silver | | | | 0.0930 | 0.094 | 101 | | |
| Zinc | | | | 0.1500 | 0.159 | 106 | | |

# Simultaneously Extractable Metals



## BLANKS

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

Concentration Units: umol/L

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 0.0440 | U | 0.0440 | U | 0.0440 | U | 0.0440 | U | 6010B |
| Copper | 0.157 | U | 0.157 | U | 0.157 | U | 0.157 | U | 6010B |
| Lead | 0.240 | U | 0.240 | U | 0.240 | U | 0.240 | U | 6010B |
| Nickel | 0.340 | U | 0.340 | U | 0.340 | U | 0.340 | U | 6010B |
| Silver | 0.093 | U | 0.093 | U | 0.093 | U | 0.093 | U | 6010B |
| Zinc | 0.150 | U | 0.150 | U | 0.150 | U | 0.150 | U | 6010B |

# Simultaneously Extractable Metals



## BLANKS

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: umol/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | | | 0.0440 | U | 0.0440 | U | 0.0440 | U | 6010B |
| Copper | | | 0.157 | U | 0.157 | U | 0.157 | U | 6010B |
| Lead | | | 0.240 | U | 0.240 | U | 0.240 | U | 6010B |
| Nickel | | | 0.340 | U | 0.340 | U | 0.340 | U | 6010B |
| Silver | | | 0.093 | U | 0.093 | U | 0.093 | U | 6010B |
| Zinc | | | 0.150 | U | 0.150 | U | 0.150 | U | 6010B |

# Simultaneously Extractable Metals



## BLANKS

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: umol/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | | | 0.0440 | U | | | | | 6010B |
| Copper | | | 0.157 | U | | | | | 6010B |
| Lead | | | 0.240 | U | | | | | 6010B |
| Nickel | | | 0.340 | U | | | | | 6010B |
| Silver | | | 0.093 | U | | | | | 6010B |
| Zinc | | | 0.150 | U | | | | | 6010B |

# Simultaneously Extractable Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-AES-03 **ICS Source:** Inorganic Ventures

**Concentration Units:** umol/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Cadmium | | 9 | 0 | 8 | 89 | | | |
| Copper | | 8 | 0 | 8 | 104 | | | |
| Lead | | 5 | 0 | 5 | 105 | | | |
| Nickel | | 17 | 0 | 16 | 96 | | | |
| Silver | | 9 | 0 | 9 | 97 | | | |
| Zinc | | 15 | 0 | 14 | 92 | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Simultaneously Extractable Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Winward Environmental, LLC

Service Request: K1008857

Project No.: Task 18.8.1

Units: UMOL/G

Project Name: Passaic RI/FS Sediment

Basis: DRY

Matrix: SEDIMENT

% Solids: 66.1

Sample Name: LPRC07CS

Lab Code: K1008857-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 75 - 125 | 0.1934 | | 0.0015 | | 0.197 | 97 | | 6010B |
| Copper | 75 - 125 | 0.307 | | 0.133 | | 0.175 | 99 | | 6010B |
| Lead | 75 - 125 | 0.271 | | 0.064 | | 0.215 | 96 | | 6010B |
| Nickel | 75 - 125 | 0.380 | | 0.011 | | 0.377 | 98 | | 6010B |
| Silver | 75 - 125 | 0.111 | | 0.002 | U | 0.103 | 108 | | 6010B |
| Zinc | 75 - 125 | 0.727 | | 0.381 | | 0.339 | 102 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable

# Simultaneously Extractable Metals

- 6 -

## DUPLICATES

Client: Winward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: UMOL/G
Project Name: Passaic RI/FS Sediment
Basis: DRY
Matrix: SEDIMENT
% Solids: 66.1

Sample Name: LPRC07CD
Lab Code: K1008857-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Cadmium | | 0.0015 | | 0.0014 | | 6.9 | | 6010B |
| Copper | 30 | 0.133 | | 0.105 | | 23.5 | | 6010B |
| Lead | 30 | 0.064 | | 0.060 | | 6.5 | | 6010B |
| Nickel | | 0.011 | | 0.009 | | 20.0 | | 6010B |
| Silver | | 0.002 | U | 0.002 | U | | | 6010B |
| Zinc | 30 | 0.3810 | | 0.3494 | | 8.7 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Simultaneously Extractable Metals



## LABORATORY CONTROL SAMPLE

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Aqueous LCS Source:** Inorganic Ventures **Solid LCS Source:**

| Analyte | Aqueous: umol/L | | | Solid: mg/kg | | | | |
|---|---|---|---|---|---|---|---|---|
| | True | Found | %R | True | Found | C | Limits | %R |
| Cadmium | 11.100 | 10.850 | 98 | | | | | |
| Copper | 9.830 | 9.836 | 100 | | | | | |
| Lead | 12.100 | 11.690 | 97 | | | | | |
| Nickel | 21.200 | 20.720 | 98 | | | | | |
| Silver | 5.790 | 6.221 | 107 | | | | | |
| Zinc | 19.100 | 19.590 | 103 | | | | | |

# Simultaneously Extractable Metals

- 9 -

## ICP SERIAL DILUTIONS

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1  Units: UMOL/L

Project Name: Passaic RI/FS Sediment

Sample Name: LPRC07CL  Lab Code: K1008857-001L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Cadmium | 0.0848 | | 0.2200 | U | 100.0 | | P |
| Copper | 7.488 | | 7.545 | | 0.8 | | P |
| Lead | 3.624 | | 3.733 | | 3.0 | | P |
| Nickel | 0.631 | | 1.700 | U | 100.0 | | P |
| Silver | 0.093 | U | 0.465 | U | | | P |
| Zinc | 21.450 | | 22.255 | | 3.8 | | P |

# Simultaneously Extractable Metals

- 10 -

## DETECTION LIMITS

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP/ICP-MS ID #:

GFAA ID #:  AA ID #:

| Analyte | Wave-length (nm) | Back-ground | MRL umol/L | PQL umol/L | M |
|---|---|---|---|---|---|
| Cadmium | 226.5 | | 0.0440 | 0.0440 | P |
| Copper | 327.3 | | 0.157 | 0.157 | P |
| Lead | 220.3 | | 0.240 | 0.240 | P |
| Nickel | 221.6 | | 0.34 | 0.34 | P |
| Silver | 328.1 | | 0.093 | 0.093 | P |
| Zinc | 206.2 | | 0.150 | 0.150 | P |

Comments:

*Columbia Analytical Services*

## Simultaneously Extractable Metals

### - 11A -

### ICP INTERELEMENT CORRECTION FACTORS

Client: Winward Environmental, LLC Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Al | Ca | Fe | Mg | Co |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000880 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000290 | 0.0000000 | -0.0001420 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0000220 | 0.0000000 | -0.0000580 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000100 | 0.0000000 | 0.0000000 |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0002330 | 0.0000000 | 0.0016240 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000590 | 0.0000000 | 0.0000150 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000230 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | -0.0000030 | 0.0000000 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000000 | 0.0001620 | 0.0000000 | 0.0006220 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0000940 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000130 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001940 |
| Phosphorus | 214.914 | -0.0005540 | 0.0000000 | 0.0006550 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | -0.0001120 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0014540 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000210 | 0.0000000 | 0.0000000 | 0.0000320 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | -0.0000020 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | 0.0001010 | 0.0000000 | 0.0000000 |

Comments:

*Columbia Analytical Services*

## Simultaneously Extractable Metals

### - 11B -

### ICP INTERELEMENT CORRECTION FACTORS

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Cr | Mn | Mo | Ni | P |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0004350 | 0.0003100 | 0.0000000 |
| Antimony | 206.833 | 0.0173600 | -0.0001330 | 0.0011910 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0003470 | -0.0001550 | 0.0005480 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | -0.0000300 | -0.0001890 | -0.0000190 | 0.0000000 |
| Boron | 249.678 | 0.0004530 | 0.0000000 | -0.0008670 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000410 | 0.0000000 | -0.0000280 | -0.0000170 | 0.0000000 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0001390 | 0.0000680 | 0.0000000 | 0.0000280 |
| Cobalt | 230.786 | -0.0000120 | 0.0000380 | 0.0011280 | -0.0001970 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000240 | 0.0025520 | -0.0024670 | 0.0000000 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | -0.0002400 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | 0.0001340 | -0.0010800 | 0.0001780 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | -0.0014420 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | -0.0000110 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | -0.0000270 | 0.0000000 | -0.0000310 | 0.0000000 |
| Nickel | 231.604 | -0.0000240 | 0.0000000 | -0.0000480 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.914 | 0.0000000 | -0.0004110 | 0.0085820 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0006630 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0192220 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000390 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000080 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0002570 | 0.0008680 | 0.0000000 | 0.0000000 | 0.0000000 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000410 | 0.0001300 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | -0.0027450 | -0.0002030 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | -0.0001050 | 0.0057510 | 0.0000000 |

Comments:

*Columbia Analytical Services*

## Simultaneously Extractable Metals

### - 11B -

### ICP INTERELEMENT CORRECTION FACTORS

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Si | Ti | V | | |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0005300 | | |
| Antimony | 206.833 | -0.0000210 | 0.0004780 | 0.0000000 | | |
| Arsenic | 189.042 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000280 | | |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0001270 | | |
| Cadmium | 226.502 | -0.0000020 | 0.0000000 | 0.0000000 | | |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Chromium | 267.716 | 0.0000000 | 0.0000590 | -0.0000760 | | |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Copper | 224.7 | -0.0000060 | 0.0004820 | -0.0000300 | | |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Lead | 220.353 | 0.0002440 | 0.0000000 | 0.0000000 | | |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Phosphorus | 214.914 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silver | 328.068 | 0.0000000 | -0.0000780 | 0.0000910 | | |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Thallium | 190.856 | 0.0000000 | -0.0008960 | -0.0007350 | | |
| Tin | 189.989 | 0.0000000 | -0.0007490 | 0.0000000 | | |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Vanadium | 292.402 | 0.0000000 | 0.0009490 | 0.0000000 | | |
| Zinc | 213.856 | 0.0000000 | -0.0003230 | 0.0000000 | | |

Comments:

# Simultaneously Extractable Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Cadmium | 15.000 | 22500 | 6010B |
| Copper | 15.000 | 90000 | 6010B |
| Lead | 15.000 | 22500 | 6010B |
| Nickel | 15.000 | 22500 | 6010B |
| Silver | 15.000 | 1800 | 6010B |
| Zinc | 15.000 | 18000 | 6010B |

Comments:

# Simultaneously Extractable Metals
-13-
## PREPARATION LOG

Client: Winward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

Method: P

| Sample ID | Preparation Date | Initial Weight (g) | Final Volume (mL) |
|---|---|---|---|
| K1008857-001 | 08/26/10 | 8.52 | 0.0 |
| K1008857-001D | 08/26/10 | 8.34 | 0.0 |
| K1008857-001S | 08/26/10 | 8.52 | 0.0 |
| K1008857-002 | 08/26/10 | 8.25 | 0.0 |
| K1008857-MB | 08/26/10 | 10.00 | 0.0 |
| LCSW | 08/26/10 | 50.0 | 50.0 |

*Columbia Analytical Services*

# Simultaneouslv Extractable Metals

- 14 -

## ANALYSIS RUN LOG

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P

**Start Date:** 09/11/10 **End Date:** 09/11/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| BLK | 1 | 09:06 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| STD A | 1 | 09:09 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| STD B | 1 | 09:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV1 | 1 | 09:15 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 09:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICB1 | 1 | 09:21 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| CCVA1 | 1 | 09:24 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 09:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB1 | 1 | 09:30 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| CRDL1 | 1 | 09:32 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 09:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICSA | 1 | 09:37 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ICSAB | 1 | 09:41 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 09:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:49 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:58 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:01 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCVA2 | 1 | 10:04 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 10:07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB2 | 1 | 10:10 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 10:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 5 | 10:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:29 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:32 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:39 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:42 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Simultaneouslv Extractable Metals

- 14 -

## ANALYSIS RUN LOG

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P

**Start Date:** 09/11/10 **End Date:** 09/11/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CCVA3 | 1 | 10:45 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 10:48 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB3 | 1 | 10:51 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 10:54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 1 | 11:03 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| LCSW | 1 | 11:05 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 11:08 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCVA4 | 1 | 11:25 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 11:28 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB4 | 1 | 11:31 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 11:33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:37 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-001 | 1 | 11:46 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| K1008857-001D | 1 | 11:50 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| K1008857-001L | 5 | 11:53 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| K1008857-001S | 1 | 11:56 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| K1008857-002 | 1 | 11:59 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 12:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCVA5 | 1 | 12:06 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 12:09 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB5 | 1 | 12:12 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 12:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:22 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Simultaneouslv Extractable Metals

- 14 -

## ANALYSIS RUN LOG

**Client:** Winward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P

**Start Date:** 09/11/10 **End Date:** 09/11/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 1 | 12:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:48 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCVA6 | 1 | 12:54 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 12:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB6 | 1 | 13:00 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 13:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCVA7 | 1 | 13:21 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |
| ZZZZZZ | 1 | 13:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB7 | 1 | 13:27 | | | | | | | X | | | | X | | X | | | | X | | | X | | | | X | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: 821/R-91-100

Analysis: AVS/SEM

| Date Prepared | Sample Name Lab Code | Initial Wt./Vol. (g) or (ml) | AVS - Final Volume (mL) | mLs 50% HCl added | SEM - Final Volume (mL) | Sample description: |
|---|---|---|---|---|---|---|
| 8/26/10 | MB | 50 | ~~50~~ 40 (1) | 10 | 100 | |
| | LCS | 10.0 | | | | |
| | 8685-12 | 8.019 | | | | |
| | 13 | 8.274 | | | | |
| | 14 | 8.325 | | | | |
| | 15 | 8.964 | | | | |
| | 16 | 8.062 | | | | |
| | 17 | 8.470 | | | | |
| | 18 | 8.042 | | | | |
| | 19 | 8.416 | | | | |
| | 20 | 8.448 | | | | |
| | 8857-1 | 8.517 | | | | |
| | 1d | 8.344 | | | | |
| | 1s | 8.078 | | | | |
| | 1sd | 8.288 | | | | |
| | 2 | 8.250 | | | | |

COPY

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup.= % REC =

(1) CES 9/8/10 T.E.

x =

STD ID# = RPD =

| | |
|---|---|
| Prepared By: CES | Date Prepared: 8/26/10 |
| Analyzes By: | Date Analyzed: |
| Reviewed By: | Date Reviewed: |

Service Request # K1008857 SEM
Instrument ID# K-ICP-AES-03

# ICP-OES Data Review Form

| | Yes | No |
|---|---|---|
| 1. Standardization completed | ✓ | |
| 2. ICV within 10 % of true value | ✓ | |
| 3. ICB below MRL | ✓ | |
| 4. CRI standard analyzed. | ✓ | |
| 5. ICS standards within 20% of true value | ✓ | |
| 6. All preceding CCVs within 10 % of true value | ✓ | |
| 7. Following CCV within 10 % of true value | ✓ | |
| 8. Bracketing CCBs below MRL | ✓ | |
| 9. Method Blank below MRL | ✓ | |
| 10. MS-MSD or Dup-MS and LCS within CAS control limits | ✓ | |
| 11. All analytes within instrument linear range | ✓ | |
| 12. Adequate rinse out time allowed between samples to eliminate memory effect | ✓ | |

Comments:
StarLIMS Run # 216240 Saved under 091110AICP03
SEM Calibration. NR Cu2247, Mg, Mn2605, Si.
Report Cd2265, Cu3273, Zn2062.

Primary Review by UMMR Date 9/11/10

Secondary Review by SC Date 9/13/10

# ICP SPIKE FORM

Service Request # K1008557
Q.C. Sample # #1

Initials / Date: LMMR / 9/1/10
Circle type of sample: Water Aqueous SEM Other:_____

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added | |
|---|---|---|---|---|---|---|
| QCP-CICV-1 | Ca, Mg, Na, K | no dilution | - | 2500 | | |
| | Al, Ba | no dilution | - | 1000 | | |
| Met1-85-M ~~0.05~~ LMMR 9/1/10 | Fe | no dilution | - | 500 | 0.05 | Expires: 7/1/11 |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | | |
| | Cu, Ag | no dilution | - | 125 | | |
| | Cr | no dilution | - | 100 | | |
| | Be | no dilution | - | 25 | | |
| QCP-CICV-2 | Sb | no dilution | - | 500 | | Expires: |
| QCP-CICV-3 ~~0.05~~ LMMR 9/1/10 | As, Pb, Se, Tl | no dilution | - | 500 | 0.05 | Expires: 8/1/11 |
| | Cd | no dilution | - | 250 | | |
| Met1-85-1- | Al | 0.50 | 100 | 5 | | |
| | Sb | 0.50 | 100 | 5 | | |
| | As | 0.10 | 100 | 10 | | |
| | Ba | 0.05 | 100 | 0.5 | | |
| | Be | 0.05 | 100 | 0.5 | | |
| | B | 0.50 | 100 | 5 | | |
| | Cd | 0.05 | 100 | 0.5 | | |
| | Ca | 0.50 | 100 | 5 | | |
| | Cr | 0.05 | 100 | 0.5 | | |
| | Co | 0.10 | 100 | 1 | | |
| | Cu | 0.10 | 100 | 1 | | |
| | Fe | 0.20 | 100 | 2 | LMMR 9/1/10 | |
| | Pb | 0.50 | 100 | 5 | | |
| | Mg | 0.20 | 100 | 2 | | |
| | Mn | 0.05 | 100 | 0.5 | | |
| | Mo | 0.10 | 100 | 1 | | |
| CRI STOCK | Ni | 0.20 | 100 | 2 | | Expires: |
| | K | 4.00 | 100 | 40 | | |
| | Se | 1.00 | 100 | 10 | | |
| | Ag | 0.10 | 100 | 1 | | |
| | Na | 2.00 | 100 | 20 | | |
| | Sn | 0.50 | 100 | 5 | | |
| | V | 0.10 | 100 | 1 | | |
| | Zn | 0.10 | 100 | 1 | | |
| | P | 2.00 | 100 | 20 | | |
| | Si | 4.00 | 100 | 40 | | |
| | Tl | 2.00 | 100 | 20 | | |
| | Ti | 0.10 | 100 | 1 | | |
| | Li | 0.10 | 100 | 1 | | |
| | Sr | 0.10 | 100 | 1 | | |

Additional Spikes

| Individual Stock Standards | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Sample Name: BLK Acquired: 9/11/2010 9:06:20 Type: Cal
Method: 2010CSEM(v3) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-106.6** | **7.093** | **5.018** | **.0007** | **.0013** | **.0033** | **.0001** | **.0032** |
| Stddev | 17.0 | .439 | .271 | .0008 | .0008 | .0003 | .0000 | .0009 |
| %RSD | 15.93 | 6.194 | 5.409 | 106.0 | 63.89 | 8.804 | 29.44 | 28.31 |
| #1 | -94.57 | 6.782 | 5.210 | .0013 | .0007 | .0035 | .0001 | .0025 |
| #2 | -118.6 | 7.403 | 4.826 | .0002 | .0018 | .0031 | .0001 | .0038 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.0021** | **33.65** | **.0003** | **-.0005** | **-.0008** | **9.050** | **.0001** | **.0000** |
| Stddev | .0010 | .64 | .0002 | .0003 | .0006 | 2.121 | .0001 | .0000 |
| %RSD | 48.77 | 1.888 | 74.51 | 60.35 | 73.52 | 23.44 | 120.2 | 154.6 |
| #1 | -.0014 | 34.10 | .0001 | -.0003 | -.0004 | 10.55 | .0000 | .0000 |
| #2 | -.0029 | 33.20 | .0005 | -.0007 | -.0013 | 7.550 | .0001 | .0000 |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0010** | **.0034** | **-42.34** | **.0007** | **.0022** | **15.50** | **3.968** | **.0022** |
| Stddev | .0007 | .0003 | 6.99 | .0001 | .0002 | .63 | .630 | .0001 |
| %RSD | 70.95 | 8.809 | 16.51 | 17.23 | 9.552 | 4.080 | 15.88 | 5.214 |
| #1 | .0015 | .0036 | -37.40 | .0008 | .0023 | 15.06 | 4.414 | .0022 |
| #2 | .0005 | .0032 | -47.28 | .0006 | .0020 | 15.95 | 3.523 | .0023 |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123130. | 3805.7 | 1506.9 |
| Stddev | 55. | 38.1 | 5.4 |
| %RSD | .04427 | 1.0018 | .35964 |
| #1 | 123170. | 3832.7 | 1510.8 |
| #2 | 123090. | 3778.7 | 1503.1 |

[illegible] 9/11/10

Sample Name: STD A  Acquired: 9/11/2010 9:09:19  Type: Cal
Method: 2010CSEM(v3)  Mode: IR  Corr. Factor: 1.000000
User: admin  :  :  :
Comment: 091110a icp7-74-b

| Elem | Sb2068 | Cd2144 | Cd2265 | Cr2677 | Co2307 | Cu2247 | Cu3273 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **483.0** | **11.41** | **10.14** | **.1063** | **3.097** | **1.724** | **11560.** |
| Stddev | .7 | .04 | .04 | .0021 | .010 | .001 | 13. |
| %RSD | .1371 | .3118 | .3507 | 2.016 | .3231 | .0675 | .1166 |
| #1 | 482.5 | 11.38 | 10.12 | .1078 | 3.089 | 1.723 | 11550. |
| #2 | 483.4 | 11.43 | 10.17 | .1048 | 3.104 | 1.725 | 11570. |

| Elem | Pb2203 | Mn2576 | Mn2605 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.7291** | **.5468** | **.0052** | **2.241** | **3.540** | **12960.** | **.1127** |
| Stddev | .0000 | .0104 | .0001 | .009 | .008 | 75. | .0021 |
| %RSD | .0008 | 1.910 | 1.366 | .4066 | .2219 | .5791 | 1.841 |
| #1 | .7291 | .5542 | .0052 | 2.235 | 3.534 | 13010. | .1142 |
| #2 | .7290 | .5395 | .0051 | 2.248 | 3.545 | 12900. | .1113 |

| Elem | Zn2062 | Zn2138 | Ti3361 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **2.729** | R **11170.** | **.4033** |
| Stddev | .006 | 8. | .0074 |
| %RSD | .2368 | .0675 | 1.841 |
| #1 | 2.725 | 11160. | .4085 |
| #2 | 2.734 | 11170. | .3980 |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123820. | 3009.1 | 1530.2 |
| Stddev | 1944. | 10.2 | 3.2 |
| %RSD | 1.5696 | .33786 | .20957 |
| #1 | 122450. | 3001.9 | 1532.4 |
| #2 | 125200. | 3016.3 | 1527.9 |

Sample Name: STD B Acquired: 9/11/2010 9:12:17 Type: Cal
Method: 2010CSEM(v3) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a icp7-93-d

| Elem | Al3944 | As1890 | Ca3158 | Fe2599 | Mg2790 | Mg2852 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **103700.** | **1434.** | **3.422** | **3.746** | **.7290** | R **26520.** |
| Stddev | 170. | 5. | .023 | .034 | .0069 | 190. |
| %RSD | .1642 | .3329 | .6710 | .8959 | .9476 | .7160 |
| #1 | 103600. | 1437. | 3.406 | 3.722 | .7242 | 26660. |
| #2 | 103800. | 1430. | 3.438 | 3.770 | .7339 | 26390. |

| Elem | Si2516 |
|---|---|
| Units | Cts/S |
| Avg | **2948.** |
| Stddev | 6. |
| %RSD | .2044 |
| #1 | 2952. |
| #2 | 2943. |

| Int. Std. | Y_3600-2 | In2306 |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | 2800.5 | 1502.3 |
| Stddev | 37.0 | 4.8 |
| %RSD | 1.3224 | .31957 |
| #1 | 2826.7 | 1505.7 |
| #2 | 2774.3 | 1498.9 |

Sample Name: ICV1 Acquired: 9/11/2010 9:15:43 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a icp7-92-a

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **184.9** | **20.53** | **33.87** | **11.11** | **11.15** | **313.5** | **9.806** | **21.12** | **9.676** |
| Stddev | .9 | .05 | .01 | .04 | .04 | .6 | .009 | .09 | .012 |
| %RSD | .4763 | .2245 | .0313 | .3749 | .3489 | .2000 | .0949 | .4057 | .1218 |
| #1 | 185.5 | 20.50 | 33.88 | 11.08 | 11.12 | 313.0 | 9.813 | 21.06 | 9.667 |
| #2 | 184.3 | 20.56 | 33.87 | 11.14 | 11.18 | 313.9 | 9.800 | 21.18 | 9.684 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value Range | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L |
| Avg | **10.02** | **44.81** | **12.04** | **516.4** | **528.3** | **22.79** | **22.15** | **20.69** | **21.21** |
| Stddev | .02 | .05 | .05 | 3.9 | 3.1 | .00 | .12 | .09 | .09 |
| %RSD | .2216 | .1041 | .3851 | .7533 | .5815 | .0091 | .5362 | .4506 | .4111 |
| #1 | 10.04 | 44.78 | 12.01 | 513.7 | 526.1 | 22.80 | 22.07 | 20.62 | 21.15 |
| #2 | 10.01 | 44.84 | 12.08 | 519.2 | 530.5 | 22.79 | 22.24 | 20.75 | 21.27 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value Range | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **6.034** | **24.85** | **19.06** | **18.99** | **-.3976** | **42.47** | ***** |
| Stddev | .030 | .02 | .04 | .03 | .9635 | .10 | ----- |
| %RSD | .4980 | .0807 | .1978 | .1504 | 242.3 | .2258 | ----- |
| #1 | 6.056 | 24.87 | 19.04 | 18.97 | .2837 | 42.54 | 6955. |
| #2 | 6.013 | 24.84 | 19.09 | 19.01 | -1.079 | 42.40 | 6960. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None |
| Value Range | | | | | | | |

Sample Name: ICV1 Acquired: 9/11/2010 9:15:43 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a icp7-92-a

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122400. | 2853.2 | 1522.4 |
| Stddev | 181. | 8.0 | 3.8 |
| %RSD | .14815 | .27933 | .25239 |
| | | | |
| #1 | 122530. | 2847.5 | 1525.1 |
| #2 | 122270. | 2858.8 | 1519.7 |

Sample Name: ICVB1 Acquired: 9/11/2010 9:18:49 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a icp7-81-a

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **36.94** | **.0202** | **.0150** | **-.0001** | **-.0009** | **126.1** | **-.0143** | **-.0025** | **-.1315** |
| Stddev | .02 | .0052 | .0088 | .0001 | .0003 | .6 | .0044 | .0001 | .0014 |
| %RSD | .0546 | 25.89 | 58.87 | 94.67 | 35.49 | .4885 | 30.65 | 2.201 | 1.098 |
| #1 | 36.93 | .0165 | .0087 | .0000 | -.0007 | 126.5 | -.0174 | -.0025 | -.1304 |
| #2 | 36.95 | .0239 | .0212 | -.0002 | -.0012 | 125.7 | -.0112 | -.0025 | -.1325 |
| Check ? | None | None | None | None | None | None | None | None | None |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0039** | **177.2** | **.0039** | **206.4** | **208.9** | **171.8** | **172.4** | **.0188** | **-.0041** |
| Stddev | .0079 | .0 | .0017 | .3 | .9 | .4 | 1.3 | .0062 | .0037 |
| %RSD | 203.8 | .0115 | 42.56 | .1683 | .4377 | .2416 | .7527 | 33.02 | 90.87 |
| #1 | -.0095 | 177.2 | .0051 | 206.7 | 208.3 | 171.5 | 171.4 | .0232 | -.0067 |
| #2 | .0017 | 177.2 | .0028 | 206.2 | 209.6 | 172.1 | 173.3 | .0144 | -.0014 |
| Check ? | None | None | None | None | None | None | None | None | None |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0048** | **.1771** | **.0060** | **.0070** | **181.2** | **.0011** | ***** |
| Stddev | .0049 | .0051 | .0018 | .0013 | 1.6 | .0029 | ----- |
| %RSD | 103.0 | 2.904 | 29.19 | 17.89 | .8966 | 267.6 | ----- |
| #1 | -.0083 | .1735 | .0073 | .0061 | 180.0 | .0031 | 6949. |
| #2 | -.0013 | .1808 | .0048 | .0079 | 182.3 | -.0010 | 6944. |
| Check ? | None | None | None | None | Chk Pass | None | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: ICVB1 Acquired: 9/11/2010 9:18:49 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110a icp7-81-a

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122300. | 2824.0 | 1525.9 |
| Stddev | 382. | 9.9 | 1.7 |
| %RSD | .31200 | .35121 | .11170 |
| | | | |
| #1 | 122570. | 2817.0 | 1527.1 |
| #2 | 122040. | 2831.0 | 1524.6 |

Sample Name: ICB Acquired: 9/11/2010 9:21:53 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0475** | **.0097** | **.0289** | **.0000** | **-.0001** | **.0905** | **-.0114** | **-.0015** | **-.0027** |
| Stddev | .0382 | .0036 | .0052 | .000 | .0002 | .0274 | .0155 | .0001 | .0021 |
| %RSD | 80.29 | 36.76 | 18.17 | 177.8 | 307.8 | 30.27 | 135.3 | 9.161 | 78.27 |
| #1 | .0205 | .0072 | .0326 | .0000 | -.0002 | .0711 | -.0224 | -.0016 | -.0012 |
| #2 | .0745 | .0123 | .0252 | -.0001 | .0001 | .1099 | -.0005 | -.0014 | -.0043 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0043** | **.1256** | **.0008** | **.5872** | **.0240** | **.0064** | **.0097** | **.0074** | **-.0011** |
| Stddev | .0015 | .1818 | .0020 | .0128 | .0932 | .0016 | .0269 | .0005 | .0011 |
| %RSD | 34.36 | 144.7 | 270.8 | 2.185 | 388.1 | 24.23 | 276.7 | 7.052 | 104.7 |
| #1 | .0053 | -.0029 | .0022 | .5963 | .0899 | .0076 | -.0093 | .0078 | -.0019 |
| #2 | .0033 | .2542 | -.0007 | .5781 | -.0419 | .0053 | .0288 | .0070 | -.0003 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0035** | **.0141** | **-.0003** | **-.0008** | **-.5035** | **-.0047** | ***** |
| Stddev | .0032 | .0123 | .0001 | .0007 | .2683 | .0034 | ----- |
| %RSD | 91.43 | 87.60 | 47.41 | 90.59 | 53.28 | 71.68 | ----- |
| #1 | .0058 | .0228 | -.0002 | -.0003 | -.6932 | -.0071 | 6895. |
| #2 | .0013 | .0054 | -.0004 | -.0013 | -.3138 | -.0023 | 6903. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: ICB Acquired: 9/11/2010 9:21:53 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123100. | 2774.9 | 1507.6 |
| Stddev | 26. | 38.3 | 1.1 |
| %RSD | .02095 | 1.3811 | .07541 |
| | | | |
| #1 | 123120. | 2747.8 | 1508.4 |
| #2 | 123080. | 2802.0 | 1506.8 |

Sample Name: CCVA1 Acquired: 9/11/2010 9:24:22 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **9.176** | **2.087** | **3.410** | **2.258** | **2.247** | **6.651** | **4.873** | **4.247** | **3.954** |
| Stddev | .075 | .008 | .030 | .006 | .010 | .487 | .002 | .014 | .016 |
| %RSD | .8126 | .3988 | .8685 | .2626 | .4261 | 7.321 | .0444 | .3375 | .3979 |
| #1 | 9.229 | 2.093 | 3.389 | 2.254 | 2.240 | 6.996 | 4.875 | 4.237 | 3.942 |
| #2 | 9.123 | 2.081 | 3.431 | 2.262 | 2.254 | 6.307 | 4.872 | 4.257 | 3.965 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.998** | **4.576** | **1.213** | **10.13** | **10.41** | **4.529** | **4.302** | **2.630** | **4.305** |
| Stddev | .015 | .209 | .004 | .97 | .19 | .007 | .060 | .013 | .012 |
| %RSD | .3762 | 4.579 | .2977 | 9.586 | 1.802 | .1531 | 1.406 | .5074 | .2754 |
| #1 | 4.008 | 4.724 | 1.211 | 9.445 | 10.28 | 4.524 | 4.259 | 2.620 | 4.297 |
| #2 | 3.987 | 4.427 | 1.216 | 10.82 | 10.55 | 4.534 | 4.344 | 2.639 | 4.313 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **2.399** | **4.928** | **3.909** | **3.910** | **4.757** | **5.289** | ***** |
| Stddev | .018 | .003 | .014 | .013 | .368 | .004 | ----- |
| %RSD | .7730 | .0643 | .3678 | .3206 | 7.741 | .0689 | ----- |
| #1 | 2.413 | 4.926 | 3.899 | 3.901 | 5.018 | 5.291 | 6964. |
| #2 | 2.386 | 4.930 | 3.920 | 3.919 | 4.497 | 5.286 | 6993. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCVA1 Acquired: 9/11/2010 9:24:22 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| nt. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Jnits | Cts/S | Cts/S | Cts/S |
| Avg | 123820. | 2803.7 | 1543.2 |
| Stddev | 324. | 5.9 | .4 |
| %RSD | .26193 | .21101 | .02615 |
| | | | |
| #1 | 124050. | 2807.9 | 1543.0 |
| #2 | 123590. | 2799.5 | 1543.5 |

Sample Name: CCVB1 Acquired: 9/11/2010 9:27:13 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **370.5** | **.0047** | **13.50** | **.0002** | **-.0003** | **251.6** | **-.0076** | **.0019** | **-.1231** |
| Stddev | 2.3 | .0021 | .08 | .0001 | .0007 | .0 | .0050 | .0002 | .0073 |
| %RSD | .6219 | 45.10 | .5691 | 37.63 | 204.3 | .0065 | 65.48 | 11.62 | 5.930 |
| #1 | 368.9 | .0032 | 13.45 | .0002 | .0002 | 251.6 | -.0111 | .0017 | -.1283 |
| #2 | 372.1 | .0062 | 13.55 | .0003 | -.0008 | 251.6 | -.0041 | .0021 | -.1180 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | None | None | None |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0058** | **178.2** | **.0038** | **418.3** | **416.3** | **18.00** | **17.24** | **.0034** | **-.0129** |
| Stddev | .0041 | 1.5 | .0064 | 1.5 | .2 | .01 | .25 | .0009 | .0017 |
| %RSD | 70.28 | .8192 | 167.1 | .3621 | .0431 | .0577 | 1.442 | 25.18 | 13.24 |
| #1 | .0029 | 177.1 | -.0007 | 419.4 | 416.2 | 18.01 | 17.42 | .0040 | -.0117 |
| #2 | .0087 | 179.2 | .0084 | 417.3 | 416.5 | 17.99 | 17.07 | .0028 | -.0141 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0010** | **.0228** | **.0014** | **.0038** | **350.3** | **-.0006** | ***** |
| Stddev | .0026 | .0032 | .0005 | .0001 | 1.5 | .0000 | ----- |
| %RSD | 274.9 | 14.16 | 36.46 | 3.650 | .4191 | 2.000 | ----- |
| #1 | .0009 | .0205 | .0017 | .0037 | 349.3 | -.0006 | 6896. |
| #2 | -.0028 | .0250 | .0010 | .0039 | 351.3 | -.0006 | 6892. |
| Check ? | None | None | None | None | Chk Pass | None | None |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: CCVB1 Acquired: 9/11/2010 9:27:13 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122300. | 2771.5 | 1511.2 |
| Stddev | 419. | .6 | 3.9 |
| %RSD | .34242 | .02157 | .26055 |
| | | | |
| #1 | 122010. | 2771.9 | 1514.0 |
| #2 | 122600. | 2771.1 | 1508.4 |

Sample Name: CCB1 Acquired: 9/11/2010 9:30:21 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1248** | **-.0075** | **-.0040** | **-.0002** | **-.0002** | **.0632** | **-.0098** | **.0007** | **-.0045** |
| Stddev | .1429 | .0082 | .0133 | .0000 | .0003 | .3164 | .0026 | .0041 | .0015 |
| %RSD | 114.5 | 109.1 | 337.2 | 16.28 | 206.9 | 500.4 | 26.61 | 553.5 | 33.72 |
| #1 | .0238 | -.0134 | -.0134 | -.0002 | -.0004 | .2870 | -.0117 | -.0022 | -.0055 |
| #2 | .2258 | -.0017 | .0055 | -.0002 | .0001 | -.1605 | -.0080 | .0036 | -.0034 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0098** | **.1111** | **.0037** | **.6521** | **-.1203** | **.0034** | **.0086** | **-.0010** | **-.0062** |
| Stddev | .0011 | .0545 | .0004 | .9484 | .2841 | .0004 | .0397 | .0037 | .0005 |
| %RSD | 10.82 | 49.04 | 12.00 | 145.4 | 236.3 | 12.22 | 459.3 | 382.5 | 8.175 |
| #1 | -.0106 | .1496 | .0034 | 1.323 | -.3212 | .0037 | -.0194 | .0017 | -.0059 |
| #2 | -.0091 | .0726 | .0040 | -.0185 | .0807 | .0031 | .0367 | -.0036 | -.0066 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0044** | **.0058** | **-.0013** | **-.0003** | **-.4612** | **-.0050** | ***** |
| Stddev | .0040 | .0078 | .0007 | .0002 | .1436 | .0011 | ----- |
| %RSD | 92.06 | 134.6 | 57.67 | 67.44 | 31.13 | 21.18 | ----- |
| #1 | -.0015 | .0003 | -.0018 | -.0002 | -.3596 | -.0042 | 6919. |
| #2 | -.0072 | .0114 | -.0007 | -.0005 | -.5627 | -.0057 | 6929. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB1 Acquired: 9/11/2010 9:30:21 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123430. | 2756.3 | 1521.3 |
| Stddev | 630. | 37.8 | 4.1 |
| %RSD | .51038 | 1.3712 | .26893 |
| | | | |
| #1 | 123880. | 2783.1 | 1518.4 |
| #2 | 122990. | 2729.6 | 1524.2 |

Sample Name: CRI Acquired: 9/11/2010 9:32:52 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-90-A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **1.904** | **.4329** | **1.315** | **.0481** | **.0472** | **1.321** | **.0861** | **.1747** | **.1591** |
| Stddev | .062 | .0043 | .013 | .0003 | .0011 | .254 | .0067 | .0028 | .0071 |
| %RSD | 3.252 | .9911 | .9938 | .7200 | 2.228 | 19.22 | 7.734 | 1.575 | 4.441 |
| #1 | 1.860 | .4299 | 1.325 | .0478 | .0480 | 1.501 | .0814 | .1766 | .1641 |
| #2 | 1.948 | .4359 | 1.306 | .0483 | .0465 | 1.142 | .0908 | .1727 | .1541 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value Range | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1722** | **.2760** | **.2420** | **3.008** | **.6403** | **.0911** | **.0860** | **.1000** | **.3468** |
| Stddev | .0212 | .0501 | .0049 | 2.042 | .0406 | .0006 | .0314 | .0010 | .0027 |
| %RSD | 12.31 | 18.16 | 2.039 | 67.89 | 6.343 | .6083 | 36.53 | 1.000 | .7766 |
| #1 | .1872 | .2405 | .2455 | 1.564 | .6115 | .0907 | .1083 | .1007 | .3449 |
| #2 | .1572 | .3114 | .2385 | 4.452 | .6690 | .0915 | .0638 | .0993 | .3487 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value Range | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0936** | **.1925** | **.1592** | **.1559** | **13.82** | **.2117** | ***** |
| Stddev | .0036 | .0132 | .0003 | .0010 | .89 | .0049 | ----- |
| %RSD | 3.820 | 6.863 | .1663 | .6571 | 6.475 | 2.314 | ----- |
| #1 | .0911 | .1832 | .1594 | .1552 | 14.45 | .2152 | 6889. |
| #2 | .0962 | .2019 | .1590 | .1566 | 13.19 | .2083 | 6896. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value Range | | | | | | | |

Sample Name: CRI Acquired: 9/11/2010 9:32:52 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-90-A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122760. | 2728.1 | 1521.2 |
| Stddev | 417. | 4.9 | 1.9 |
| %RSD | .33940 | .17833 | .12731 |
| | | | |
| #1 | 122470. | 2731.5 | 1519.8 |
| #2 | 123060. | 2724.7 | 1522.5 |

Sample Name: CRI Acquired: 9/11/2010 9:35:19 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICAP ICP7-89-A 0.1/10

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0377** | **.0922** | **.1270** | **.0044** | **.0037** | **.4246** | **.0327** | **.0129** | **.0206** |
| Stddev | .0166 | .0005 | .0229 | .0001 | .0004 | .6642 | .0037 | .0046 | .0022 |
| %RSD | 43.99 | .5810 | 18.04 | 2.228 | 9.842 | 156.4 | 11.17 | 35.88 | 10.60 |
| #1 | .0494 | .0918 | .1108 | .0045 | .0035 | -.0450 | .0301 | .0096 | .0222 |
| #2 | .0260 | .0926 | .1432 | .0043 | .0040 | .8943 | .0353 | .0161 | .0191 |
| Check ? Value Range | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0334** | **.3266** | **.0487** | **.5063** | **.0257** | **.0144** | **.0337** | **.0193** | **.0284** |
| Stddev | .0039 | .0617 | .0035 | .9611 | .0077 | .0015 | .0147 | .0001 | .0006 |
| %RSD | 11.68 | 18.88 | 7.097 | 189.8 | 29.92 | 10.38 | 43.52 | .7264 | 2.211 |
| #1 | .0306 | .2830 | .0511 | -.1733 | .0203 | .0133 | .0233 | .0194 | .0288 |
| #2 | .0361 | .3703 | .0462 | 1.186 | .0311 | .0154 | .0441 | .0192 | .0280 |
| Check ? Value Range | Chk Pass | Chk Pass | Chk Pass | None | None | Chk Pass | None | Chk Pass | Chk Pass |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0181** | **.0269** | **.0266** | **.0275** | **1.397** | **.0153** | ***** |
| Stddev | .0010 | .0094 | .0015 | .0002 | .678 | .0033 | ----- |
| %RSD | 5.638 | 34.89 | 5.491 | .6231 | 48.52 | 21.46 | ----- |
| #1 | .0174 | .0335 | .0276 | .0276 | 1.877 | .0130 | 6921. |
| #2 | .0189 | .0202 | .0255 | .0274 | .9179 | .0176 | 6888. |
| Check ? Value Range | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |

Sample Name: CRI Acquired: 9/11/2010 9:35:19 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICAP ICP7-89-A 0.1/10

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122480. | 2716.3 | 1526.8 |
| Stddev | 220. | 14.9 | 4.5 |
| %RSD | .17989 | .54836 | .29348 |
| | | | |
| #1 | 122320. | 2726.9 | 1530.0 |
| #2 | 122640. | 2705.8 | 1523.7 |

Sample Name: ICSA Acquired: 9/11/2010 9:37:43 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-83-C

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **17670.** | **-.0463** | **-.0019** | **-.0036** | **.0027** | **12120.** | **.0663** | **-.0126** |
| Stddev | 106. | .0122 | .0156 | .0000 | .0009 | 78. | .0033 | .0035 |
| %RSD | .5982 | 26.40 | 814.9 | 1.312 | 33.04 | .6436 | 4.970 | 28.03 |
| #1 | 17600. | -.0549 | .0091 | -.0036 | .0034 | 12070. | .0640 | -.0151 |
| #2 | 17750. | -.0377 | -.0129 | -.0037 | .0021 | 12180. | .0686 | -.0101 |
| Check ? | Chk Pass | None | None | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-2.405** | **.0512** | **3345.** | **.0199** | **20630.** | **16160.** | **.3267** | **.4270** |
| Stddev | .025 | .0027 | 21. | .0083 | 153. | 223. | .0023 | .0064 |
| %RSD | 1.047 | 5.241 | .6384 | 41.60 | .7419 | 1.380 | .6890 | 1.502 |
| #1 | -2.387 | .0493 | 3330. | .0141 | 20520. | 16320. | .3283 | .4224 |
| #2 | -2.423 | .0531 | 3361. | .0258 | 20740. | 16000. | .3251 | .4315 |
| Check ? | None | None | Chk Pass | None | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0020** | **.0501** | **-.0053** | **-.0587** | **.0146** | **.0129** | **.3042** | **.0863** |
| Stddev | .0018 | .0011 | .0003 | .0138 | .0016 | .0031 | .6189 | .0052 |
| %RSD | 91.22 | 2.172 | 5.061 | 23.52 | 11.17 | 24.50 | 203.4 | 6.059 |
| #1 | -.0007 | .0493 | -.0051 | -.0684 | .0134 | .0151 | .7419 | .0826 |
| #2 | -.0033 | .0508 | -.0055 | -.0489 | .0157 | .0106 | -.1334 | .0900 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSA Acquired: 9/11/2010 9:37:43 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-83-C

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 6654. |
| #2 | 6653. |
| | |
| Check ? | None |
| Value | |
| Range | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 111070. | 2605.6 | 1356.7 |
| Stddev | 388. | 23.9 | 7.9 |
| %RSD | .34914 | .91739 | .58494 |
| | | | |
| #1 | 110790. | 2622.5 | 1362.3 |
| #2 | 111340. | 2588.7 | 1351.1 |

Sample Name: ICSAB Acquired: 9/11/2010 9:41:42 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-92-B

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **17640.** | **7.642** | **.0075** | **8.455** | **8.470** | **11870.** | **9.524** | **8.078** |
| Stddev | 45. | .037 | .0040 | .015 | .018 | 60. | .090 | .014 |
| %RSD | .2548 | .4864 | 53.16 | .1711 | .2189 | .5080 | .9439 | .1666 |
| #1 | 17680. | 7.616 | .0047 | 8.465 | 8.483 | 11910. | 9.587 | 8.088 |
| #2 | 17610. | 7.668 | .0103 | 8.445 | 8.457 | 11820. | 9.460 | 8.069 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | F **4.972** | **7.706** | **3254.** | **4.665** | **20320.** | **16100.** | **8.799** | **8.905** |
| Stddev | .015 | .056 | 29. | .012 | 4. | 118. | .102 | .027 |
| %RSD | .3033 | .7313 | .8963 | .2522 | .0188 | .7313 | 1.165 | .3038 |
| #1 | 4.982 | 7.746 | 3275. | 4.674 | 20330. | 16020. | 8.872 | 8.924 |
| #2 | 4.961 | 7.666 | 3233. | 4.657 | 20320. | 16190. | 8.727 | 8.886 |
| Check ? | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | 7.868 | | | | | | | |
| Range | -20.00% | | | | | | | |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0050** | **16.12** | **9.449** | **9.603** | **14.45** | **13.86** | **-.2364** | **.0789** |
| Stddev | .0036 | .02 | .031 | .098 | .02 | .03 | 1.089 | .0036 |
| %RSD | 71.41 | .1251 | .3327 | 1.021 | .1171 | .2121 | 460.5 | 4.614 |
| #1 | .0076 | 16.13 | 9.471 | 9.673 | 14.46 | 13.83 | .5334 | .0815 |
| #2 | .0025 | 16.11 | 9.427 | 9.534 | 14.44 | 13.88 | -1.006 | .0763 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSAB Acquired: 9/11/2010 9:41:42 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A ICP7-92-B

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| #1 | 6682. |
| #2 | 6674. |
| Check ? | None |
| Value | |
| Range | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 111610. | 2609.9 | 1364.2 |
| Stddev | 369. | 15.6 | 3.3 |
| %RSD | .33051 | .59673 | .23922 |
| #1 | 111350. | 2598.9 | 1361.9 |
| #2 | 111870. | 2620.9 | 1366.5 |

Sample Name: RB Acquired: 9/11/2010 9:46:29 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.2355** | **.0202** | **-.0213** | **.0003** | **.0001** | **1.513** | **-.0073** | **-.0018** | **.0005** |
| #1 | .3172 | .0054 | -.0298 | .0008 | .0004 | 1.505 | -.0014 | -.0005 | .0008 |
| #2 | .1537 | .0350 | -.0127 | -.0003 | -.0003 | 1.521 | -.0133 | -.0032 | .0001 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0037** | **.4230** | **.0071** | **.3646** | **.0021** | **.0007** | **.0005** | **.0022** | **.0094** |
| #1 | -.0062 | .3609 | .0088 | .4111 | .0015 | .0006 | .0015 | .0034 | .0119 |
| #2 | -.0011 | .4851 | .0055 | .3180 | .0027 | .0008 | -.0005 | .0009 | .0069 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0163** | **.0121** | **-.1952** | **-.0054** | ***** |
| #1 | .0181 | .0115 | -.4552 | -.0029 | 6867. |
| #2 | .0146 | .0127 | .0648 | -.0079 | 6836. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 121950. | 2664.3 | 1514.0 |
| #1 | 122130. | 2660.2 | 1517.1 |
| #2 | 121770. | 2668.4 | 1510.9 |

Sample Name: FILTER BLANK Acquired: 9/11/2010 9:49:29 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1685** | **.0135** | **-.0119** | **.0000** | **-.0004** | **.1371** | **-.0170** | **.0004** | **-.0014** |
| #1 | .1058 | .0238 | -.0143 | -.0002 | -.0005 | .1547 | -.0133 | -.0023 | .0046 |
| #2 | .2312 | .0032 | -.0096 | .0003 | -.0004 | .1194 | -.0207 | .0031 | -.0075 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0072** | **.0688** | **.0053** | **-.1637** | **.0002** | **-.0031** | **-.0042** | **-.0015** | **-.0076** |
| #1 | .0107 | -.0004 | .0009 | -.1816 | .0007 | -.0053 | -.0039 | -.0031 | -.0070 |
| #2 | .0037 | .1381 | .0097 | -.1459 | -.0003 | -.0008 | -.0044 | .0001 | -.0082 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0024** | **-.0030** | **-.1301** | **-.0084** | ***** |
| #1 | -.0036 | -.0036 | .0157 | -.0100 | 6965. |
| #2 | -.0011 | -.0024 | -.2759 | -.0068 | 6949. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 124050. | 2667.1 | 1543.0 |
| #1 | 124060. | 2673.5 | 1543.3 |
| #2 | 124050. | 2660.7 | 1542.8 |

Sample Name: K1008685-MB Acquired: 9/11/2010 9:52:01 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **1.130** | **.0001** | **.0061** | **-.0003** | **-.0002** | F **1.562** | **-.0051** | **.0021** |
| #1 | 1.141 | -.0183 | -.0123 | -.0002 | -.0006 | 1.413 | -.0035 | .0018 |
| #2 | 1.118 | .0185 | .0246 | -.0003 | .0001 | 1.712 | -.0067 | .0025 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0832** | **.0870** | **.1816** | **.0051** | **.2878** | **.0008** | **-.0041** | **.0019** |
| #1 | .0824 | .0782 | .1349 | .0033 | .3879 | .0015 | -.0055 | .0014 |
| #2 | .0840 | .0958 | .2284 | .0068 | .1877 | .0002 | -.0027 | .0023 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0009** | **.0047** | F **.2723** | F **.2637** | **.8980** | **-.0043** | ***** |
| #1 | .0002 | .0035 | .2726 | .2636 | .4237 | -.0058 | 6883. |
| #2 | .0017 | .0059 | .2720 | .2637 | 1.372 | -.0027 | 6846. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122060. | 2654.9 | 1525.0 |
| #1 | 122340. | 2654.3 | 1527.5 |
| #2 | 121790. | 2655.6 | 1522.6 |

Sample Name: LCSW Acquired: 9/11/2010 9:55:01 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | **185.4** | **-.0011** | **33.44** | **10.97** | **10.89** | F **314.9** | **9.827** | **20.31** |
| #1 | 184.6 | -.0065 | 33.45 | 10.96 | 10.88 | 315.7 | 9.845 | 20.27 |
| #2 | 186.1 | .0042 | 33.44 | 10.98 | 10.91 | 314.0 | 9.808 | 20.35 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **9.357** | **9.733** | **44.14** | **11.69** | F **483.5** | **22.14** | **-.0016** | **20.84** |
| #1 | 9.333 | 9.712 | 44.34 | 11.67 | 484.4 | 22.24 | .0005 | 20.80 |
| #2 | 9.381 | 9.755 | 43.93 | 11.70 | 482.7 | 22.05 | -.0036 | 20.87 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **6.028** | **24.24** | **19.40** | **19.24** | **.1224** | **-.0046** | ***** |
| #1 | 5.986 | 24.33 | 19.38 | 19.27 | -.1733 | -.0064 | 6901. |
| #2 | 6.070 | 24.15 | 19.41 | 19.21 | .4180 | -.0028 | 6880. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 120650. | 2628.3 | 1535.7 |
| #1 | 120070. | 2627.3 | 1539.3 |
| #2 | 121220. | 2629.4 | 1532.2 |

Sample Name: K1008685-001 Acquired: 9/11/2010 9:58:09 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **406.2** | **-.0137** | **.0771** | **.0309** | **.0328** | F **711.0** | **1.904** | **.1221** |
| #1 | 405.8 | -.0198 | .0832 | .0307 | .0326 | 708.6 | 1.911 | .1216 |
| #2 | 406.6 | -.0077 | .0710 | .0311 | .0330 | 713.3 | 1.897 | .1227 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.4352** | **.2615** | F **922.1** | **.8912** | **1055.** | **30.39** | **.0001** | **.4702** |
| #1 | -.4304 | .2771 | 920.1 | .8848 | 1048. | 30.41 | .0006 | .4674 |
| #2 | -.4400 | .2459 | 924.0 | .8977 | 1063. | 30.37 | -.0003 | .4729 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0088** | **.7015** | **21.33** | **20.72** | **117.8** | **1.812** | ***** |
| #1 | -.0079 | .6946 | 21.23 | 20.71 | 117.4 | 1.816 | 7215. |
| #2 | -.0097 | .7084 | 21.42 | 20.73 | 118.1 | 1.807 | 7191. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 126240. | 2787.6 | 1497.2 |
| #1 | 125930. | 2797.1 | 1504.2 |
| #2 | 126540. | 2778.1 | 1490.3 |

Sample Name: K1008685-002 Acquired: 9/11/2010 10:01:24 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **563.8** | **-.0175** | **.0744** | **.0865** | **.0889** | F **863.3** | **3.992** | **.1550** |
| #1 | 565.0 | -.0270 | .0643 | .0868 | .0895 | 838.0 | 3.986 | .1575 |
| #2 | 562.6 | -.0080 | .0845 | .0863 | .0883 | 888.5 | 3.999 | .1525 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0204** | **.6814** | F **859.7** | **2.512** | **1044.** | **23.33** | **-.0010** | **.6262** |
| #1 | .0373 | .6766 | 832.4 | 2.510 | 1016. | 23.27 | -.0010 | .6265 |
| #2 | .0036 | .6861 | 887.0 | 2.515 | 1071. | 23.40 | -.0009 | .6258 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0038** | **1.209** | **30.80** | **30.01** | **171.2** | **5.519** | ***** |
| #1 | -.0014 | 1.207 | 30.82 | 30.00 | 168.2 | 5.507 | 7375. |
| #2 | -.0062 | 1.212 | 30.77 | 30.02 | 174.2 | 5.531 | 7385. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 129680. | 2893.3 | 1496.3 |
| #1 | 129960. | 2936.0 | 1496.9 |
| #2 | 129400. | 2850.6 | 1495.7 |

Sample Name: CCVA2 Acquired: 9/11/2010 10:04:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **9.262** | **2.116** | **3.451** | **2.299** | **2.265** | **6.598** | **4.972** | **4.216** | **3.939** |
| Stddev | .055 | .007 | .004 | .017 | .016 | .056 | .012 | .024 | .027 |
| %RSD | .5949 | .3203 | .1141 | .7214 | .6843 | .8527 | .2441 | .5664 | .6919 |
| #1 | 9.223 | 2.111 | 3.454 | 2.310 | 2.276 | 6.638 | 4.963 | 4.232 | 3.958 |
| #2 | 9.301 | 2.121 | 3.449 | 2.287 | 2.254 | 6.558 | 4.980 | 4.199 | 3.919 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.987** | **4.495** | **1.222** | **10.74** | **10.00** | **4.456** | **4.123** | **2.666** | **4.350** |
| Stddev | .021 | .193 | .001 | 1.73 | .02 | .017 | .060 | .020 | .025 |
| %RSD | .5181 | 4.285 | .0998 | 16.10 | .2115 | .3826 | 1.459 | .7640 | .5709 |
| #1 | 3.972 | 4.359 | 1.223 | 11.96 | 10.02 | 4.444 | 4.165 | 2.680 | 4.367 |
| #2 | 4.002 | 4.631 | 1.222 | 9.519 | 9.988 | 4.468 | 4.080 | 2.651 | 4.332 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **2.483** | **4.877** | **4.031** | **3.964** | **3.521** | **5.322** | ***** |
| Stddev | .010 | .001 | .051 | .002 | .333 | .004 | ----- |
| %RSD | .4176 | .0098 | 1.272 | .0513 | 9.443 | .0665 | ----- |
| #1 | 2.476 | 4.876 | 4.068 | 3.963 | 3.756 | 5.320 | 6849. |
| #2 | 2.490 | 4.877 | 3.995 | 3.966 | 3.286 | 5.325 | 6917. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCVA2 Acquired: 9/11/2010 10:04:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 121800. | 2598.6 | 1542.2 |
| Stddev | 142. | 1.4 | 9.1 |
| %RSD | .11688 | .05421 | .58941 |
| | | | |
| #1 | 121700. | 2597.7 | 1535.7 |
| #2 | 121900. | 2599.6 | 1548.6 |

Sample Name: CCVB2 Acquired: 9/11/2010 10:07:32 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **377.3** | **.0006** | **13.59** | **.0003** | **-.0006** | **259.0** | **-.0135** | **.0045** | **-.1278** |
| Stddev | 1.3 | .0028 | .05 | .0002 | .0006 | .2 | .0046 | .0007 | .0028 |
| %RSD | .3548 | 449.1 | .3612 | 61.19 | 102.9 | .0799 | 33.92 | 15.54 | 2.176 |
| #1 | 376.3 | -.0014 | 13.56 | .0002 | -.0002 | 258.9 | -.0167 | .0050 | -.1258 |
| #2 | 378.2 | .0026 | 13.63 | .0004 | -.0011 | 259.2 | -.0102 | .0040 | -.1297 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | None | None | None |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0002** | **179.9** | **.0045** | **428.6** | **391.1** | **17.88** | **16.59** | **.0019** | **-.0071** |
| Stddev | .0048 | .2 | .0029 | 7.0 | .8 | .01 | .13 | .0019 | .0014 |
| %RSD | 2596. | .1383 | 65.27 | 1.629 | .2171 | .0791 | .7924 | 101.3 | 20.24 |
| #1 | .0036 | 179.7 | .0065 | 433.6 | 390.5 | 17.87 | 16.68 | .0032 | -.0061 |
| #2 | -.0032 | 180.1 | .0024 | 423.7 | 391.7 | 17.89 | 16.50 | .0005 | -.0081 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0057** | **.0169** | **.0022** | **.0046** | **322.7** | **-.0006** | ***** |
| Stddev | .0065 | .0048 | .0003 | .0001 | .8 | .0020 | ----- |
| %RSD | 114.9 | 28.47 | 15.60 | 2.340 | .2630 | 341.3 | ----- |
| #1 | -.0011 | .0203 | .0025 | .0047 | 322.1 | .0008 | 6855. |
| #2 | -.0103 | .0135 | .0020 | .0045 | 323.3 | -.0020 | 6839. |
| Check ? | None | None | None | None | Chk Pass | None | None |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: CCVB2 Acquired: 9/11/2010 10:07:32 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 120530. | 2571.7 | 1518.6 |
| Stddev | 249. | 19.5 | 6.1 |
| %RSD | .20656 | .75891 | .40166 |
| | | | |
| #1 | 120360. | 2557.9 | 1522.9 |
| #2 | 120710. | 2585.5 | 1514.3 |

Sample Name: CCB2 Acquired: 9/11/2010 10:10:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0598** | **.0066** | **.0362** | **.0003** | **-.0005** | **.1568** | **-.0119** | **-.0023** | **-.0109** |
| Stddev | .0488 | .0134 | .0036 | .0005 | .0007 | .2467 | .0063 | .0017 | .0041 |
| %RSD | 81.62 | 201.0 | 9.844 | 148.5 | 147.2 | 157.3 | 53.26 | 76.72 | 37.45 |
| #1 | -.0943 | -.0028 | .0337 | .0000 | .0000 | .3313 | -.0163 | -.0010 | -.0138 |
| #2 | -.0253 | .0161 | .0387 | .0007 | -.0009 | -.0176 | -.0074 | -.0035 | -.0080 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0009** | **.0952** | **.0032** | **-.6108** | **-.0706** | **.0005** | **-.0083** | **-.0020** | **-.0002** |
| Stddev | .0060 | .0272 | .0023 | 1.387 | .0626 | .0006 | .0175 | .0020 | .0009 |
| %RSD | 653.6 | 28.57 | 72.83 | 227.1 | 88.56 | 121.2 | 212.1 | 97.19 | 439.7 |
| #1 | .0052 | .0760 | .0048 | -1.592 | -.1149 | .0001 | .0041 | -.0034 | -.0008 |
| #2 | -.0033 | .1144 | .0015 | .3702 | -.0264 | .0010 | -.0207 | -.0006 | .0004 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0023** | **-.0068** | **.0016** | **-.0010** | **-.3979** | **-.0063** | ***** |
| Stddev | .0014 | .0021 | .0017 | .0015 | .2269 | .0027 | ----- |
| %RSD | 58.30 | 30.86 | 100.7 | 152.3 | 57.02 | 42.10 | ----- |
| #1 | -.0033 | -.0054 | .0005 | .0001 | -.5583 | -.0082 | 6808. |
| #2 | -.0014 | -.0083 | .0028 | -.0020 | -.2374 | -.0044 | 6818. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB2 Acquired: 9/11/2010 10:10:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 121640. | 2581.2 | 1509.3 |
| Stddev | 518. | 20.8 | 2.0 |
| %RSD | .42608 | .80663 | .13136 |
| | | | |
| #1 | 121270. | 2595.9 | 1507.9 |
| #2 | 122000. | 2566.5 | 1510.7 |

Sample Name: K1008685-003 Acquired: 9/11/2010 10:13:11 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **862.6** | **-.0453** | **.1228** | **.1713** | **.1770** | F **1307.** | **5.446** | **.2190** |
| #1 | 867.6 | -.0533 | .1295 | .1708 | .1769 | 1305. | 5.433 | .2222 |
| #2 | 857.5 | -.0373 | .1162 | .1717 | .1771 | 1308. | 5.458 | .2158 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.9558** | **.4259** | F **1823.** | **4.431** | **1805.** | **41.93** | **-.0038** | **.9630** |
| #1 | -.9533 | .4328 | 1820. | 4.435 | 1802. | 41.35 | -.0045 | .9601 |
| #2 | -.9584 | .4190 | 1826. | 4.427 | 1808. | 42.51 | -.0031 | .9658 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/LR | umol/L | umol/L | Cts/S |
| Avg | **-.0095** | **1.997** | F **64.65** | F **62.06** | **272.7** | **8.262** | ***** |
| #1 | -.0067 | 1.989 | 64.46 | 62.06 | 273.5 | 8.266 | 7635. |
| #2 | -.0123 | 2.005 | 64.83 | 62.06 | 272.0 | 8.259 | 7622. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 132710. | 2878.5 | 1477.5 |
| #1 | 133470. | 2897.6 | 1478.5 |
| #2 | 131950. | 2859.4 | 1476.4 |

Sample Name: K1008685-004 Acquired: 9/11/2010 10:16:33 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **553.8** | **-.0150** | **.0592** | **.0695** | **.0704** | F **720.5** | **3.335** | **.1919** |
| #1 | 552.8 | -.0124 | .0550 | .0697 | .0704 | 718.8 | 3.336 | .1905 |
| #2 | 554.8 | -.0176 | .0634 | .0692 | .0703 | 722.2 | 3.334 | .1934 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.4340** | **.3116** | F **976.8** | **2.306** | **1082.** | **16.80** | **.0005** | **.7554** |
| #1 | -.4371 | .2959 | 975.9 | 2.310 | 1082. | 16.76 | -.0013 | .7568 |
| #2 | -.4310 | .3273 | 977.7 | 2.302 | 1082. | 16.83 | .0024 | .7540 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0019** | **1.494** | **30.78** | **29.73** | **188.1** | **5.117** | ***** |
| #1 | -.0054 | 1.490 | 30.71 | 29.75 | 187.2 | 5.111 | 7298. |
| #2 | .0016 | 1.499 | 30.85 | 29.71 | 189.0 | 5.122 | 7260. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 127290. | 2727.6 | 1492.2 |
| #1 | 126960. | 2721.5 | 1493.4 |
| #2 | 127630. | 2733.8 | 1491.0 |

Sample Name: K1008685-005 Acquired: 9/11/2010 10:19:47 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **388.3** | **-.0132** | **.2071** | **.0696** | **.0698** | F **701.3** | **3.282** | **.1173** |
| #1 | 387.4 | -.0113 | .1953 | .0694 | .0698 | 703.1 | 3.277 | .1217 |
| #2 | 389.2 | -.0151 | .2188 | .0697 | .0698 | 699.5 | 3.287 | .1129 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mo2020 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | **3.524** | **4.149** | F **665.2** | **2.901** | **1030.** | F **978.6** | **20.26** | **.0035** |
| #1 | 3.531 | 4.139 | 666.5 | 2.900 | 1028. | 975.8 | 20.25 | .0030 |
| #2 | 3.518 | 4.159 | 663.9 | 2.902 | 1032. | 981.4 | 20.27 | .0039 |

| Elem | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.4503** | **.0102** | **.7618** | **19.15** | **18.43** | **121.4** | **3.832** | ***** |
| #1 | .4503 | .0088 | .7607 | 19.09 | 18.39 | 121.9 | 3.833 | 7189. |
| #2 | .4503 | .0116 | .7630 | 19.21 | 18.47 | 120.9 | 3.830 | 7176. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 125470. | 2706.4 | 1489.3 |
| #1 | 125460. | 2696.0 | 1489.3 |
| #2 | 125480. | 2716.9 | 1489.4 |

Sample Name: K1008685-005D Acquired: 9/11/2010 10:23:01 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **458.6** | **.0039** | **.2834** | **.0723** | **.0733** | F **784.8** | **3.863** | **.1272** |
| #1 | 459.1 | -.0106 | .2941 | .0725 | .0730 | 785.1 | 3.862 | .1264 |
| #2 | 458.1 | .0184 | .2727 | .0721 | .0736 | 784.5 | 3.864 | .1280 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **5.303** | **5.934** | F **645.6** | **3.177** | **1259.** | **19.85** | **.0048** | **.4744** |
| #1 | 5.307 | 5.913 | 647.3 | 3.171 | 1259. | 19.82 | .0044 | .4740 |
| #2 | 5.299 | 5.955 | 643.8 | 3.183 | 1258. | 19.88 | .0052 | .4748 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0123** | **.7906** | **17.80** | **16.97** | **147.8** | **4.210** | ***** |
| #1 | .0132 | .7875 | 17.79 | 16.95 | 148.0 | 4.212 | 7206. |
| #2 | .0114 | .7936 | 17.81 | 16.98 | 147.5 | 4.207 | 7187. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 125470. | 2680.4 | 1472.9 |
| #1 | 125540. | 2676.0 | 1471.6 |
| #2 | 125400. | 2684.7 | 1474.2 |

Sample Name: K1008685-005L Acquired: 9/11/2010 10:26:17 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **74.86** | **.0134** | **.0427** | **.0137** | **.0134** | **148.8** | **.6801** | **.0228** | **.7106** |
| #1 | 74.63 | .0045 | .0273 | .0139 | .0139 | 147.6 | .6763 | .0226 | .7065 |
| #2 | 75.09 | .0223 | .0581 | .0136 | .0129 | 149.9 | .6838 | .0231 | .7146 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.8474** | **141.6** | **.5826** | **198.2** | **4.274** | **-.0014** | **.0908** | **.0042** | **.1519** |
| #1 | .8408 | 140.6 | .5841 | 198.0 | 4.261 | -.0009 | .0887 | .0034 | .1585 |
| #2 | .8540 | 142.5 | .5810 | 198.3 | 4.288 | -.0018 | .0929 | .0050 | .1453 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **3.922** | **3.831** | **23.39** | **.8034** | ***** |
| #1 | 3.907 | 3.829 | 23.47 | .7980 | 6937. |
| #2 | 3.936 | 3.833 | 23.31 | .8089 | 6920. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122460. | 2566.8 | 1536.5 |
| #1 | 122740. | 2569.5 | 1541.3 |
| #2 | 122180. | 2564.1 | 1531.6 |

Sample Name: K1008685-005S Acquired: 9/11/2010 10:29:17 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **585.5** | **-.0090** | **33.61** | **11.13** | **10.97** | F **995.8** | **12.55** | **20.45** |
| #1 | 585.8 | -.0068 | 33.62 | 11.12 | 10.97 | 993.7 | 12.53 | 20.45 |
| #2 | 585.1 | -.0113 | 33.59 | 11.13 | 10.97 | 997.9 | 12.57 | 20.44 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **12.66** | **13.68** | F **704.1** | **14.58** | **1523.** | **39.98** | **.0010** | **21.34** |
| #1 | 12.65 | 13.66 | 702.7 | 14.57 | 1520. | 39.84 | .0018 | 21.34 |
| #2 | 12.66 | 13.70 | 705.5 | 14.59 | 1526. | 40.13 | .0001 | 21.34 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | Cts/S |
| Avg | **6.040** | **23.60** | F **38.40** | **36.59** | **118.3** | **3.806** | ***** |
| #1 | 6.063 | 23.54 | 38.36 | 36.60 | 119.0 | 3.797 | 7198. |
| #2 | 6.018 | 23.66 | 38.43 | 36.57 | 117.6 | 3.816 | 7178. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 124700. | 2642.2 | 1480.2 |
| #1 | 124660. | 2643.8 | 1480.2 |
| #2 | 124740. | 2640.7 | 1480.3 |

Sample Name: K1008685-006 Acquired: 9/11/2010 10:32:37 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **414.7** | **-.0076** | **.0982** | **.0566** | **.0567** | F **661.3** | **2.463** | **.1270** |
| #1 | 414.1 | -.0174 | .1044 | .0561 | .0560 | 661.0 | 2.473 | .1247 |
| #2 | 415.2 | .0022 | .0920 | .0571 | .0575 | 661.7 | 2.453 | .1292 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **-.0617** | **.4972** | F **710.1** | **1.646** | F **854.5** | **15.26** | **-.0002** | **.5080** |
| #1 | -.0601 | .4957 | 709.5 | 1.637 | 850.3 | 15.25 | -.0023 | .5055 |
| #2 | -.0633 | .4987 | 710.7 | 1.655 | 858.7 | 15.26 | .0019 | .5104 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0035** | **.7570** | **22.93** | **22.11** | **114.8** | **3.226** | ***** |
| #1 | .0049 | .7608 | 22.79 | 22.10 | 115.0 | 3.228 | 7258. |
| #2 | .0022 | .7532 | 23.07 | 22.13 | 114.6 | 3.225 | 7212. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 126670. | 2613.0 | 1506.3 |
| #1 | 126270. | 2601.0 | 1513.4 |
| #2 | 127070. | 2625.0 | 1499.3 |

Sample Name: K1008685-007 Acquired: 9/11/2010 10:35:51 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **448.6** | **-.0261** | **.1083** | **.0566** | **.0561** | F **666.6** | **2.704** | **.1283** |
| #1 | 448.2 | -.0143 | .0841 | .0564 | .0558 | 666.8 | 2.717 | .1272 |
| #2 | 449.1 | -.0380 | .1324 | .0567 | .0565 | 666.4 | 2.691 | .1294 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **.1636** | **.6905** | F **664.9** | **1.865** | F **847.9** | **14.83** | **.0027** | **.5687** |
| #1 | .1528 | .7036 | 667.4 | 1.855 | 846.7 | 14.88 | .0028 | .5675 |
| #2 | .1744 | .6774 | 662.4 | 1.875 | 849.0 | 14.78 | .0027 | .5700 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0072** | **.8093** | **22.01** | **21.59** | **131.2** | **3.233** | ***** |
| #1 | -.0026 | .8118 | 21.96 | 21.57 | 130.9 | 3.236 | 7319. |
| #2 | -.0118 | .8068 | 22.07 | 21.60 | 131.4 | 3.230 | 7312. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 127740. | 2692.9 | 1523.6 |
| #1 | 127540. | 2688.4 | 1528.1 |
| #2 | 127940. | 2697.3 | 1519.2 |

Sample Name: K1008685-008 Acquired: 9/11/2010 10:39:07 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **467.6** | **-.0319** | **.0804** | **.0529** | **.0538** | F **648.0** | **2.441** | **.1241** |
| #1 | 466.3 | -.0270 | .0723 | .0522 | .0538 | 655.1 | 2.432 | .1235 |
| #2 | 469.0 | -.0367 | .0885 | .0537 | .0538 | 640.9 | 2.450 | .1246 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **-.4749** | **.1969** | F **898.9** | **1.456** | F **923.3** | **26.07** | **-.0023** | **.6021** |
| #1 | -.4880 | .1980 | 906.2 | 1.450 | 927.7 | 25.97 | -.0049 | .6028 |
| #2 | -.4617 | .1957 | 891.6 | 1.461 | 918.9 | 26.17 | .0003 | .6014 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0059** | **.6880** | **26.65** | **26.23** | **132.5** | **3.385** | ***** |
| #1 | -.0029 | .6846 | 26.48 | 26.23 | 132.2 | 3.374 | 7396. |
| #2 | -.0089 | .6914 | 26.82 | 26.22 | 132.9 | 3.395 | 7355. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130220. | 2731.4 | 1531.3 |
| #1 | 130340. | 2717.2 | 1538.9 |
| #2 | 130100. | 2745.5 | 1523.7 |

Sample Name: K1008685-009 Acquired: 9/11/2010 10:42:21 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **432.7** | **.0001** | **.0893** | **.0486** | **.0488** | F **649.3** | **2.200** | **.1664** |
| #1 | 430.3 | .0095 | .0992 | .0481 | .0490 | 638.7 | 2.162 | .1702 |
| #2 | 435.1 | -.0093 | .0793 | .0490 | .0487 | 660.0 | 2.237 | .1626 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **-.0228** | **.6674** | F **876.1** | **1.584** | F **794.3** | **41.42** | **-.0035** | **.5973** |
| #1 | -.0225 | .6483 | 867.7 | 1.577 | 791.6 | 40.95 | -.0016 | .5963 |
| #2 | -.0231 | .6865 | 884.5 | 1.591 | 797.0 | 41.89 | -.0055 | .5983 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0067** | **.7905** | **20.95** | **20.76** | **122.4** | **2.768** | ***** |
| #1 | -.0074 | .7756 | 20.86 | 20.74 | 122.9 | 2.725 | 7404. |
| #2 | -.0059 | .8054 | 21.03 | 20.78 | 121.8 | 2.811 | 7391. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130610. | 2654.5 | 1545.3 |
| #1 | 131890. | 2686.2 | 1550.4 |
| #2 | 129330. | 2622.9 | 1540.2 |

Sample Name: CCVA3 Acquired: 9/11/2010 10:45:41 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **9.629** | **2.127** | **3.473** | **2.292** | **2.242** | **6.831** | **4.958** | **4.146** |
| Stddev | .082 | .013 | .006 | .009 | .008 | .119 | .010 | .011 |
| %RSD | .8543 | .6087 | .1667 | .3700 | .3548 | 1.744 | .2045 | .2707 |
| #1 | 9.687 | 2.117 | 3.469 | 2.286 | 2.236 | 6.746 | 4.965 | 4.138 |
| #2 | 9.571 | 2.136 | 3.477 | 2.298 | 2.247 | 6.915 | 4.951 | 4.154 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.864** | **4.012** | **4.491** | **1.218** | **11.46** | **9.515** | **4.431** | F **3.918** |
| Stddev | .009 | .000 | .148 | .010 | 1.49 | .034 | .024 | .032 |
| %RSD | .2277 | .0084 | 3.301 | .7951 | 12.98 | .3613 | .5364 | .8140 |
| #1 | 3.858 | 4.012 | 4.596 | 1.211 | 10.41 | 9.490 | 4.448 | 3.895 |
| #2 | 3.870 | 4.012 | 4.386 | 1.225 | 12.51 | 9.539 | 4.414 | 3.940 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Fail |
| High Limit | | | | | | | | 4.550 |
| Low Limit | | | | | | | | -10.00% |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **2.643** | **4.322** | **2.482** | **4.817** | **4.060** | **3.995** | **3.198** | **5.280** |
| Stddev | .008 | .016 | .008 | .022 | .026 | .011 | .481 | .003 |
| %RSD | .2982 | .3714 | .3074 | .4669 | .6372 | .2843 | 15.05 | .0570 |
| #1 | 2.637 | 4.310 | 2.487 | 4.833 | 4.041 | 3.987 | 3.539 | 5.282 |
| #2 | 2.648 | 4.333 | 2.476 | 4.801 | 4.078 | 4.003 | 2.858 | 5.278 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCVA3 Acquired: 9/11/2010 10:45:41 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 7019. |
| #2 | 7000. |
| | |
| Check ? | None |
| High Limit | |
| Low Limit | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 124290. | 2498.1 | 1571.8 |
| Stddev | 59. | 11.1 | 1.7 |
| %RSD | .04759 | .44315 | .10683 |
| | | | |
| #1 | 124330. | 2490.3 | 1573.0 |
| #2 | 124250. | 2505.9 | 1570.6 |

Sample Name: CCVB3 Acquired: 9/11/2010 10:48:32 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | **381.3** | **.0036** | **13.71** | **.0001** | **.0008** | **255.1** | **-.0009** | **.0044** |
| Stddev | 1.1 | .0024 | .03 | .0004 | .0004 | .3 | .0021 | .0046 |
| %RSD | .3005 | 65.26 | .2144 | 278.8 | 57.52 | .1015 | 241.7 | 103.8 |
| #1 | 382.1 | .0019 | 13.73 | -.0001 | .0004 | 254.9 | -.0024 | .0077 |
| #2 | 380.5 | .0053 | 13.69 | .0004 | .0011 | 255.3 | .0006 | .0012 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.1223** | **-.0042** | **175.5** | **.0022** | **424.2** | **373.8** | **17.47** | **15.40** |
| Stddev | .0022 | .0019 | .1 | .0052 | 2.2 | .0 | .02 | .05 |
| %RSD | 1.789 | 46.75 | .0822 | 237.3 | .5113 | .0099 | .0987 | .3211 |
| #1 | -.1238 | -.0028 | 175.6 | -.0015 | 425.7 | 373.8 | 17.49 | 15.44 |
| #2 | -.1207 | -.0055 | 175.4 | .0059 | 422.7 | 373.8 | 17.46 | 15.37 |
| Check ? | None | None | Chk Pass | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0019** | **-.0082** | **-.0060** | **.0207** | **.0039** | **.0042** | F **306.4** | **.0041** |
| Stddev | .0017 | .0058 | .0037 | .0045 | .0013 | .0013 | 1.7 | .0011 |
| %RSD | 85.58 | 71.19 | 61.38 | 21.63 | 32.91 | 31.76 | .5649 | 27.02 |
| #1 | .0031 | -.0041 | -.0034 | .0175 | .0048 | .0032 | 305.1 | .0049 |
| #2 | .0008 | -.0123 | -.0087 | .0239 | .0030 | .0051 | 307.6 | .0033 |
| Check ? | None | None | None | None | None | None | Chk Fail | None |
| Value | | | | | | | 356.0 | |
| Range | | | | | | | -10.00% | |

Sample Name: CCVB3 Acquired: 9/11/2010 10:48:32 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 7071. |
| #2 | 7060. |
| | |
| Check ? | None |
| Value | |
| Range | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123360. | 2513.0 | 1580.7 |
| Stddev | 4. | 6.8 | 7.5 |
| %RSD | .00329 | .26930 | .47414 |
| | | | |
| #1 | 123360. | 2508.2 | 1586.0 |
| #2 | 123350. | 2517.8 | 1575.4 |

Sample Name: CCB3 Acquired: 9/11/2010 10:51:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0133** | **-.0042** | **.0112** | **.0000** | **-.0010** | **-.0696** | **-.0114** | **-.0050** | **-.0044** |
| Stddev | .0077 | .0083 | .0218 | .0001 | .0001 | .3893 | .0009 | .0029 | .0050 |
| %RSD | 57.66 | 200.0 | 195.1 | 400.6 | 14.85 | 559.3 | 7.489 | 57.89 | 113.5 |
| #1 | .0188 | -.0100 | -.0042 | .0000 | -.0011 | .2057 | -.0108 | -.0030 | -.0079 |
| #2 | .0079 | .0017 | .0266 | .0001 | -.0009 | -.3449 | -.0120 | -.0071 | -.0009 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0212** | **.0974** | **.0042** | **-.0423** | **-.1063** | **.0010** | **.0090** | **.0007** | **-.0036** |
| Stddev | .0059 | .0609 | .0029 | 1.222 | .0954 | .0006 | .0055 | .0020 | .0018 |
| %RSD | 27.92 | 62.51 | 68.98 | 2889. | 89.78 | 62.01 | 60.69 | 303.7 | 50.66 |
| #1 | .0253 | .1404 | .0022 | .8219 | -.0388 | .0006 | .0051 | -.0008 | -.0049 |
| #2 | .0170 | .0543 | .0063 | -.9065 | -.1738 | .0015 | .0129 | .0021 | -.0023 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0001** | **.0025** | **.0014** | **-.0003** | **-.5619** | **-.0062** | ***** |
| Stddev | .0004 | .0007 | .0011 | .0005 | .7524 | .0048 | ----- |
| %RSD | 431.4 | 29.88 | 80.56 | 162.7 | 133.9 | 76.16 | ----- |
| #1 | -.0003 | .0030 | .0021 | -.0007 | -1.094 | -.0029 | 7013. |
| #2 | .0002 | .0020 | .0006 | .0000 | -.0298 | -.0096 | 6987. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB3 Acquired: 9/11/2010 10:51:40 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| nt. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Jnits | Cts/S | Cts/S | Cts/S |
| Avg | 123040. | 2460.8 | 1560.0 |
| Stddev | 340. | 8.4 | 2.4 |
| %RSD | .27638 | .33965 | .15094 |
| | | | |
| #1 | 122790. | 2454.9 | 1561.6 |
| #2 | 123280. | 2466.7 | 1558.3 |

Sample Name: K1008685-010 Acquired: 9/11/2010 10:54:12 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **650.3** | **-.0354** | **.1212** | **.0723** | **.0743** | F **806.9** | **3.087** | **.2006** |
| #1 | 649.2 | -.0407 | .1051 | .0725 | .0739 | 805.0 | 3.078 | .1982 |
| #2 | 651.4 | -.0301 | .1373 | .0720 | .0747 | 808.8 | 3.096 | .2030 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.3393** | **.6071** | F **1216.** | **2.313** | **1174.** | **31.64** | **.0033** | **.8920** |
| #1 | -.3430 | .6158 | 1216. | 2.304 | 1174. | 31.54 | .0022 | .8916 |
| #2 | -.3357 | .5984 | 1216. | 2.321 | 1174. | 31.75 | .0044 | .8924 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0042** | **1.069** | **34.65** | **34.13** | **170.4** | **4.679** | ***** |
| #1 | -.0081 | 1.078 | 34.59 | 34.03 | 171.9 | 4.677 | 7557. |
| #2 | -.0002 | 1.060 | 34.70 | 34.23 | 169.0 | 4.681 | 7577. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 131410. | 2675.9 | 1545.8 |
| #1 | 131500. | 2680.2 | 1544.2 |
| #2 | 131320. | 2671.6 | 1547.5 |

Sample Name: K1008685-011 Acquired: 9/11/2010 10:57:31 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **668.8** | **-.0187** | **.0909** | **.0889** | **.0902** | F **763.9** | **3.383** | **.2080** |
| #1 | 669.0 | -.0293 | .0896 | .0882 | .0897 | 759.4 | 3.388 | .2078 |
| #2 | 668.5 | -.0082 | .0922 | .0896 | .0906 | 768.4 | 3.379 | .2083 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1538** | **1.184** | F **1254.** | **2.977** | **1107.** | **36.92** | **.0002** | **1.097** |
| #1 | .1571 | 1.188 | 1249. | 2.972 | 1099. | 36.86 | -.0004 | 1.093 |
| #2 | .1506 | 1.179 | 1258. | 2.983 | 1116. | 36.98 | .0008 | 1.102 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0053** | **1.117** | **34.98** | **34.56** | **197.6** | **6.894** | ***** |
| #1 | -.0114 | 1.120 | 34.92 | 34.50 | 197.1 | 6.907 | 7618. |
| #2 | .0008 | 1.114 | 35.03 | 34.61 | 198.0 | 6.881 | 7616. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **131880.** | **2695.3** | 1553.4 |
| #1 | 131800. | 2710.6 | 1555.7 |
| #2 | 131950. | 2680.1 | 1551.1 |

Sample Name: FILTER BLANK Acquired: 9/11/2010 11:00:53 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.0518** | **-.0080** | **.0108** | **-.0003** | **-.0003** | **-.1141** | **-.0125** | **-.0039** | **-.0050** |
| #1 | -.1161 | -.0019 | .0177 | -.0007 | -.0004 | -.0532 | -.0157 | -.0084 | -.0062 |
| #2 | .0125 | -.0142 | .0040 | .0001 | -.0002 | -.1750 | -.0093 | .0007 | -.0039 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0137** | **.0807** | **.0073** | **-.2242** | **-.0005** | **-.0006** | **-.0021** | **-.0058** | **-.0048** |
| #1 | .0150 | -.0082 | .0074 | -.2328 | .0001 | .0000 | -.0035 | -.0057 | -.0078 |
| #2 | .0124 | .1695 | .0072 | -.2157 | -.0010 | -.0012 | -.0007 | -.0059 | -.0018 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0044** | **-.0037** | **-.7399** | **-.0058** | ***** |
| #1 | -.0069 | -.0036 | -.6454 | -.0059 | 7185. |
| #2 | -.0018 | -.0038 | -.8344 | -.0057 | 7157. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 126870. | 2514.1 | 1608.9 |
| #1 | 126270. | 2524.3 | 1613.1 |
| #2 | 127470. | 2503.8 | 1604.6 |

Sample Name: K1008685-MB Acquired: 9/11/2010 11:03:25 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.3459** | **.0026** | **.0315** | **-.0001** | **-.0003** | **F 1.474** | **-.0007** | **-.0055** |
| #1 | .3551 | .0014 | .0577 | .0001 | -.0006 | 1.744 | .0052 | -.0057 |
| #2 | .3366 | .0037 | .0053 | -.0003 | .0000 | 1.204 | -.0067 | -.0052 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0753** | **.0865** | **-.0154** | **.0055** | **.0884** | **.0019** | **-.0037** | **.0121** |
| #1 | .0723 | .0838 | .0467 | .0041 | .0574 | .0025 | -.0032 | .0088 |
| #2 | .0783 | .0893 | -.0775 | .0070 | .1194 | .0014 | -.0041 | .0154 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0053** | **-.0079** | **.0399** | **.0381** | **-.0426** | **-.0033** | ***** |
| #1 | .0060 | -.0121 | .0402 | .0391 | -.0119 | -.0067 | 7109. |
| #2 | .0046 | -.0037 | .0396 | .0371 | -.0734 | .0000 | 7109. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 124510. | 2463.6 | 1593.2 |
| #1 | 124870. | 2463.7 | 1599.3 |
| #2 | 124150. | 2463.6 | 1587.1 |

Sample Name: LCSW Acquired: 9/11/2010 11:05:51 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | **191.9** | **-.0119** | **34.41** | **11.09** | **10.85** | F **316.2** | **9.828** | **19.82** |
| #1 | 191.8 | -.0157 | 34.38 | 11.07 | 10.83 | 315.8 | 9.814 | 19.81 |
| #2 | 191.9 | -.0080 | 34.45 | 11.10 | 10.87 | 316.5 | 9.842 | 19.83 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **9.124** | **9.836** | **42.97** | **11.69** | F **453.8** | **21.52** | **.0006** | **20.72** |
| #1 | 9.104 | 9.816 | 42.77 | 11.67 | 454.9 | 21.50 | -.0004 | 20.69 |
| #2 | 9.143 | 9.855 | 43.17 | 11.70 | 452.7 | 21.54 | .0016 | 20.76 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **6.221** | **23.53** | **19.59** | **19.51** | **.7680** | **-.0061** | ***** |
| #1 | 6.207 | 23.52 | 19.55 | 19.50 | .0700 | -.0033 | 7091. |
| #2 | 6.236 | 23.54 | 19.62 | 19.52 | 1.466 | -.0089 | 7093. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 124130. | 2494.4 | 1587.6 |
| #1 | 123950. | 2504.5 | 1588.8 |
| #2 | 124310. | 2484.4 | 1586.4 |

Sample Name: K1008685-012 Acquired: 9/11/2010 11:08:59 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **601.6** | **.0068** | **.2708** | **.1021** | **.1023** | F **780.5** | **4.915** | **.1560** |
| #1 | 601.5 | .0042 | .2704 | .1013 | .1028 | 778.9 | 4.904 | .1602 |
| #2 | 601.8 | .0093 | .2711 | .1028 | .1018 | 782.1 | 4.927 | .1519 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **6.061** | **7.125** | F **818.3** | **3.978** | F **845.1** | **24.83** | **.0021** | **.6198** |
| #1 | 6.045 | 7.129 | 816.8 | 3.970 | 842.8 | 24.80 | .0037 | .6193 |
| #2 | 6.077 | 7.120 | 819.8 | 3.987 | 847.4 | 24.86 | .0006 | .6202 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0183** | **.9166** | **24.97** | **24.57** | **201.4** | **6.706** | ***** |
| #1 | .0190 | .9125 | 24.89 | 24.53 | 201.3 | 6.697 | 7537. |
| #2 | .0177 | .9206 | 25.04 | 24.61 | 201.4 | 6.715 | 7521. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 131550. | 2670.4 | 1552.8 |
| #1 | 131820. | 2671.3 | 1555.0 |
| #2 | 131280. | 2669.5 | 1550.6 |

Sample Name: K1008685-013 Acquired: 9/11/2010 11:12:14 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **445.2** | **-.0231** | **.1731** | **.0748** | **.0741** | F **689.7** | **3.237** | **.1279** |
| #1 | 443.3 | -.0200 | .1747 | .0745 | .0745 | 692.5 | 3.237 | .1247 |
| #2 | 447.1 | -.0262 | .1715 | .0750 | .0736 | 686.9 | 3.237 | .1311 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **1.756** | **2.522** | F **767.7** | **2.487** | F **693.9** | **24.86** | **-.0008** | **.4846** |
| #1 | 1.760 | 2.533 | 768.4 | 2.486 | 692.4 | 24.87 | -.0007 | .4871 |
| #2 | 1.752 | 2.510 | 766.9 | 2.488 | 695.4 | 24.85 | -.0008 | .4820 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0097** | **.6519** | **22.11** | **22.06** | **136.4** | **3.427** | ***** |
| #1 | -.0145 | .6469 | 22.12 | 22.13 | 135.1 | 3.430 | 7457. |
| #2 | -.0050 | .6569 | 22.09 | 22.00 | 137.7 | 3.425 | 7425. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130370. | 2630.2 | 1572.9 |
| #1 | 130110. | 2620.7 | 1574.3 |
| #2 | 130640. | 2639.8 | 1571.4 |

Sample Name: K1008685-014 Acquired: 9/11/2010 11:15:28 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **2268.** | **-.0869** | **.4666** | **.5576** | **.5720** | F **2088.** | **15.95** | **.6483** |
| #1 | 2287. | -.0915 | .4548 | .5555 | .5687 | 2096. | 15.96 | .6483 |
| #2 | 2249. | -.0823 | .4783 | .5596 | .5752 | 2081. | 15.94 | .6482 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **17.07** | **21.65** | F **3249.** | **17.64** | **2211.** | **97.08** | **-.0009** | **2.521** |
| #1 | 17.00 | 21.71 | 3266. | 17.58 | 2216. | 97.05 | -.0023 | 2.508 |
| #2 | 17.14 | 21.58 | 3232. | 17.70 | 2206. | 97.11 | .0005 | 2.535 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/LR | umol/L | umol/L | Cts/S |
| Avg | **.0080** | **2.854** | F **126.9** | F **124.9** | **798.7** | **22.89** | ***** |
| #1 | .0076 | 2.850 | 126.4 | 124.7 | 801.1 | 22.96 | 8780. |
| #2 | .0084 | 2.858 | 127.4 | 125.1 | 796.3 | 22.82 | 8748. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 152300. | 3147.3 | 1545.6 |
| #1 | 152420. | 3140.5 | 1550.0 |
| #2 | 152180. | 3154.1 | 1541.2 |

Sample Name: K1008685-015 Acquired: 9/11/2010 11:18:52 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **454.2** | **-.0095** | **.1252** | **.0662** | **.0661** | **810.6** | **3.058** | **.1132** | **1.097** |
| #1 | 452.7 | -.0004 | .1415 | .0665 | .0663 | 811.8 | 3.061 | .1159 | 1.101 |
| #2 | 455.7 | -.0186 | .1090 | .0660 | .0658 | 809.5 | 3.056 | .1104 | 1.093 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **1.854** | **784.4** | **2.373** | **724.3** | **23.55** | **.0006** | **.5066** | **-.0078** | **.7069** |
| #1 | 1.860 | 786.9 | 2.371 | 720.3 | 23.52 | .0007 | .5029 | -.0070 | .6999 |
| #2 | 1.849 | 782.0 | 2.375 | 728.4 | 23.58 | .0004 | .5102 | -.0087 | .7139 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **21.34** | **21.21** | **147.1** | **4.297** | ***** |
| #1 | 21.29 | 21.21 | 146.5 | 4.287 | 7418. |
| #2 | 21.39 | 21.21 | 147.7 | 4.307 | 7415. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **129960.** | **2633.6** | **1566.9** |
| #1 | 130100. | 2623.2 | 1566.2 |
| #2 | 129820. | 2644.0 | 1567.5 |

Sample Name: K1008685-016 Acquired: 9/11/2010 11:22:07 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **247.2** | **.0119** | **.1010** | **.0571** | **.0557** | **535.0** | **1.235** | **.2599** | **2.438** |
| #1 | 246.3 | -.0037 | .1044 | .0573 | .0556 | 533.2 | 1.240 | .2590 | 2.426 |
| #2 | 248.0 | .0275 | .0976 | .0568 | .0558 | 536.7 | 1.231 | .2608 | 2.451 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.133** | **552.6** | **3.730** | **224.9** | **49.30** | **-.0015** | **.5201** | **.0040** | **.4492** |
| #1 | 3.124 | 550.7 | 3.722 | 224.3 | 49.34 | -.0023 | .5205 | .0045 | .4429 |
| #2 | 3.142 | 554.5 | 3.739 | 225.6 | 49.25 | -.0006 | .5197 | .0034 | .4554 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **21.84** | **22.15** | **97.71** | **2.959** | ***** |
| #1 | 21.80 | 22.14 | 96.77 | 2.956 | 7379. |
| #2 | 21.89 | 22.16 | 98.65 | 2.962 | 7350. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130290. | 2644.8 | 1610.5 |
| #1 | 130030. | 2650.7 | 1613.6 |
| #2 | 130540. | 2638.9 | 1607.4 |

Sample Name: CCVA4 Acquired: 9/11/2010 11:25:21 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **9.095** | **2.070** | **3.378** | **2.242** | **2.204** | **6.862** | **4.872** | **4.060** |
| Stddev | .117 | .000 | .004 | .014 | .011 | .226 | .010 | .033 |
| %RSD | 1.282 | .0132 | .1300 | .6307 | .4948 | 3.295 | .2066 | .8026 |
| #1 | 9.178 | 2.070 | 3.375 | 2.232 | 2.196 | 7.022 | 4.865 | 4.037 |
| #2 | 9.013 | 2.070 | 3.381 | 2.252 | 2.211 | 6.702 | 4.879 | 4.083 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.810** | **3.958** | **4.326** | **1.185** | **12.10** | **9.312** | **4.295** | F **3.963** |
| Stddev | .010 | .017 | .103 | .003 | .70 | .076 | .008 | .014 |
| %RSD | .2571 | .4398 | 2.389 | .2489 | 5.751 | .8133 | .1870 | .3599 |
| #1 | 3.803 | 3.970 | 4.253 | 1.183 | 11.61 | 9.366 | 4.289 | 3.973 |
| #2 | 3.817 | 3.946 | 4.400 | 1.187 | 12.59 | 9.259 | 4.300 | 3.953 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Fail |
| High Limit | | | | | | | | 4.550 |
| Low Limit | | | | | | | | -10.00% |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **2.605** | **4.238** | **2.486** | **4.722** | **3.959** | **3.912** | **3.266** | **5.187** |
| Stddev | .016 | .027 | .002 | .001 | .026 | .011 | 1.043 | .008 |
| %RSD | .6053 | .6474 | .0806 | .0126 | .6606 | .2906 | 31.94 | .1512 |
| #1 | 2.594 | 4.218 | 2.488 | 4.722 | 3.940 | 3.904 | 4.004 | 5.182 |
| #2 | 2.617 | 4.257 | 2.485 | 4.722 | 3.977 | 3.920 | 2.528 | 5.193 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCVA4 Acquired: 9/11/2010 11:25:21 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 6890. |
| #2 | 6867. |
| | |
| Check ? | None |
| High Limit | |
| Low Limit | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122670. | 2553.6 | 1555.9 |
| Stddev | 467. | 11.2 | 5.9 |
| %RSD | .38051 | .43768 | .37943 |
| | | | |
| #1 | 122340. | 2561.5 | 1560.0 |
| #2 | 123000. | 2545.7 | 1551.7 |

Sample Name: CCVB4 Acquired: 9/11/2010 11:28:12 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **374.0** | **.0131** | **13.54** | **-.0003** | **-.0001** | **248.8** | **-.0077** | **.0057** |
| Stddev | 1.3 | .0011 | .05 | .0001 | .0008 | 1.8 | .0113 | .0001 |
| %RSD | .3430 | 8.733 | .3593 | 42.98 | 669.0 | .7250 | 146.6 | 2.154 |
| #1 | 373.1 | .0139 | 13.50 | -.0004 | -.0007 | 250.1 | .0003 | .0058 |
| #2 | 374.9 | .0123 | 13.57 | -.0002 | .0004 | 247.5 | -.0157 | .0056 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.1228** | **.0047** | **169.1** | **.0033** | **410.6** | **F 369.5** | **17.09** | **15.20** |
| Stddev | .0060 | .0171 | .3 | .0005 | .3 | 1.9 | .04 | .06 |
| %RSD | 4.896 | 366.9 | .1914 | 15.98 | .0741 | .5267 | .2074 | .3886 |
| #1 | -.1185 | .0167 | 169.3 | .0036 | 410.8 | 368.2 | 17.07 | 15.16 |
| #2 | -.1270 | -.0074 | 168.9 | .0029 | 410.4 | 370.9 | 17.12 | 15.24 |
| Check ? | None | None | Chk Pass | None | Chk Pass | Chk Fail | None | None |
| Value | | | | | | 411.4 | | |
| Range | | | | | | -10.00% | | |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0007** | **-.0038** | **-.0010** | **.0203** | **.0042** | **.0026** | **F 298.2** | **-.0024** |
| Stddev | .0008 | .0043 | .0023 | .0069 | .0019 | .0007 | 1.9 | .0025 |
| %RSD | 111.7 | 114.5 | 230.0 | 34.03 | 45.94 | 27.06 | .6391 | 102.9 |
| #1 | .0001 | -.0068 | -.0027 | .0251 | .0055 | .0031 | 296.8 | -.0041 |
| #2 | .0013 | -.0007 | .0006 | .0154 | .0028 | .0021 | 299.5 | -.0007 |
| Check ? | None | None | None | None | None | None | Chk Fail | None |
| Value | | | | | | | 356.0 | |
| Range | | | | | | | -10.00% | |

Sample Name: CCVB4 Acquired: 9/11/2010 11:28:12 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 6933. |
| #2 | 6918. |
| | |
| Check ? | None |
| Value | |
| Range | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123120. | 2542.2 | 1555.3 |
| Stddev | 243. | 18.3 | 4.1 |
| %RSD | .19741 | .71952 | .26169 |
| | | | |
| #1 | 122950. | 2529.3 | 1558.2 |
| #2 | 123300. | 2555.2 | 1552.4 |

Sample Name: CCB4 Acquired: 9/11/2010 11:31:20 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1600** | **-.0056** | **.0130** | **-.0001** | **-.0008** | **-.2357** | **-.0024** | **.0011** | **.0024** |
| Stddev | .0607 | .0085 | .0296 | .0002 | .0001 | .2111 | .0017 | .0011 | .0010 |
| %RSD | 37.96 | 152.2 | 227.0 | 141.5 | 9.560 | 89.56 | 71.93 | 98.49 | 41.36 |
| #1 | .2029 | -.0116 | .0339 | -.0003 | -.0008 | -.0864 | -.0036 | .0019 | .0031 |
| #2 | .1171 | .0004 | -.0079 | .0000 | -.0007 | -.3850 | -.0012 | .0003 | .0017 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0059** | **.0194** | **.0035** | **-.5659** | **-.1637** | **.0003** | **-.0028** | **-.0007** | **-.0014** |
| Stddev | .0037 | .2380 | .0004 | .9367 | .0384 | .0006 | .0101 | .0002 | .0014 |
| %RSD | 62.53 | 1224. | 12.84 | 165.5 | 23.45 | 182.4 | 358.2 | 26.43 | 101.7 |
| #1 | .0033 | -.1489 | .0031 | -1.228 | -.1365 | -.0001 | -.0100 | -.0009 | -.0004 |
| #2 | .0086 | .1878 | .0038 | .0965 | -.1908 | .0008 | .0043 | -.0006 | -.0024 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0048** | **-.0057** | **.0005** | **-.0004** | **-.7811** | **-.0073** | ***** |
| Stddev | .0012 | .0024 | .0013 | .0004 | .3615 | .0033 | ----- |
| %RSD | 24.54 | 41.26 | 273.8 | 109.6 | 46.28 | 44.67 | ----- |
| #1 | -.0056 | -.0074 | .0014 | -.0007 | -.5255 | -.0050 | 6907. |
| #2 | -.0039 | -.0040 | -.0005 | -.0001 | -1.037 | -.0096 | 6897. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB4 Acquired: 9/11/2010 11:31:20 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123000. | 2565.9 | 1544.8 |
| Stddev | 144. | 20.0 | .6 |
| %RSD | .11702 | .78100 | .03601 |
| #1 | 122900. | 2551.7 | 1544.4 |
| #2 | 123100. | 2580.0 | 1545.2 |

Sample Name: K1008685-017 Acquired: 9/11/2010 11:33:52 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **383.6** | **.0047** | **.1638** | **.0840** | **.0839** | F **653.4** | **2.790** | **.1266** |
| #1 | 385.0 | .0173 | .1690 | .0844 | .0841 | 654.7 | 2.784 | .1271 |
| #2 | 382.1 | -.0078 | .1585 | .0836 | .0836 | 652.1 | 2.796 | .1260 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **3.776** | **4.591** | F **731.6** | **3.105** | F **572.4** | **25.35** | **-.0014** | **.5149** |
| #1 | 3.754 | 4.591 | 735.7 | 3.100 | 570.6 | 25.27 | -.0014 | .5140 |
| #2 | 3.797 | 4.591 | 727.6 | 3.110 | 574.1 | 25.42 | -.0015 | .5157 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0010** | **.6625** | **23.43** | **23.46** | **125.1** | **3.294** | ***** |
| #1 | -.0001 | .6620 | 23.49 | 23.44 | 125.1 | 3.292 | 7285. |
| #2 | .0022 | .6631 | 23.37 | 23.49 | 125.1 | 3.296 | 7288. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 129010. | 2684.8 | 1544.4 |
| #1 | 129250. | 2668.2 | 1543.1 |
| #2 | 128780. | 2701.4 | 1545.6 |

Sample Name: K1008685-018 Acquired: 9/11/2010 11:37:07 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **410.5** | **-.0098** | **.1508** | **.0829** | **.0821** | F **649.0** | **3.061** | **.1344** |
| #1 | 410.0 | -.0078 | .1427 | .0826 | .0819 | 646.8 | 3.058 | .1356 |
| #2 | 411.0 | -.0118 | .1590 | .0831 | .0824 | 651.2 | 3.063 | .1333 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **3.176** | **4.010** | F **747.4** | **2.968** | F **537.4** | **28.36** | **-.0008** | **.5359** |
| #1 | 3.167 | 4.006 | 745.2 | 2.957 | 539.1 | 28.32 | .0009 | .5349 |
| #2 | 3.186 | 4.013 | 749.6 | 2.979 | 535.6 | 28.40 | -.0024 | .5369 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0073** | **.6764** | **23.20** | **23.24** | **137.8** | **3.821** | ***** |
| #1 | .0085 | .6809 | 23.11 | 23.21 | 137.4 | 3.825 | 7314. |
| #2 | .0061 | .6718 | 23.29 | 23.27 | 138.2 | 3.816 | 7285. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 129290. | 2669.5 | 1552.2 |
| #1 | 129220. | 2673.2 | 1556.0 |
| #2 | 129370. | 2665.9 | 1548.4 |

Sample Name: K1008685-019 Acquired: 9/11/2010 11:40:18 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **382.2** | **-.0113** | **.1034** | **.0832** | **.0824** | F **737.1** | **2.322** | **.1602** |
| #1 | 380.9 | -.0091 | .0926 | .0826 | .0812 | 764.2 | 2.322 | .1552 |
| #2 | 383.5 | -.0134 | .1143 | .0838 | .0837 | 710.0 | 2.323 | .1651 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **2.436** | **3.367** | F **912.1** | **3.341** | F **430.6** | **44.84** | **-.0028** | **.5920** |
| #1 | 2.397 | 3.372 | 946.6 | 3.333 | 433.9 | 44.77 | -.0014 | .5937 |
| #2 | 2.476 | 3.363 | 877.7 | 3.349 | 427.2 | 44.90 | -.0042 | .5903 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0044** | **.9310** | **27.89** | **28.04** | **120.3** | **4.545** | ***** |
| #1 | .0026 | .9284 | 27.86 | 28.06 | 122.8 | 4.544 | 7376. |
| #2 | .0062 | .9335 | 27.93 | 28.01 | 117.8 | 4.546 | 7347. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130470. | 2642.0 | 1559.6 |
| #1 | 130500. | 2570.0 | 1563.8 |
| #2 | 130450. | 2714.0 | 1555.4 |

Sample Name: K1008685-020 Acquired: 9/11/2010 11:43:32 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **436.3** | **-.0135** | **.1482** | **.0864** | **.0878** | F **1137.** | **1.906** | **.1734** |
| #1 | 433.3 | -.0284 | .1471 | .0861 | .0873 | 1140. | 1.871 | .1720 |
| #2 | 439.2 | .0014 | .1493 | .0867 | .0883 | 1133. | 1.940 | .1748 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **1.181** | **2.131** | F **1055.** | **3.629** | F **447.2** | **41.19** | **.0060** | **1.019** |
| #1 | 1.170 | 2.120 | 1060. | 3.627 | 447.0 | 40.84 | .0057 | 1.012 |
| #2 | 1.193 | 2.142 | 1051. | 3.631 | 447.5 | 41.54 | .0062 | 1.026 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0001** | **1.412** | **32.73** | **33.04** | **129.2** | **4.364** | ***** |
| #1 | .0021 | 1.382 | 32.68 | 33.06 | 129.5 | 4.287 | 7430. |
| #2 | -.0018 | 1.442 | 32.79 | 33.02 | 128.9 | 4.441 | 7386. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **133280.** | **2680.6** | **1568.7** |
| #1 | 134840. | 2676.6 | 1571.4 |
| #2 | 131710. | 2684.7 | 1565.9 |

Sample Name: K1008857-001 Acquired: 9/11/2010 11:46:47 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | F **585.5** | **-.0113** | **.2423** | **.0853** | **.0848** | F **679.6** | **4.479** | **.1700** |
| #1 | 586.2 | -.0098 | .2499 | .0854 | .0845 | 676.1 | 4.485 | .1697 |
| #2 | 584.9 | -.0129 | .2347 | .0852 | .0851 | 683.1 | 4.472 | .1703 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/LR | umol/L | umol/LR | umol/L | umol/L | umol/L |
| Avg | **6.473** | **7.488** | F **733.6** | **3.624** | F **607.0** | **22.02** | **.0024** | **.6305** |
| #1 | 6.470 | 7.507 | 731.2 | 3.623 | 608.6 | 22.07 | .0039 | .6299 |
| #2 | 6.475 | 7.469 | 736.0 | 3.625 | 605.3 | 21.97 | .0009 | .6311 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0161** | **.7773** | **21.45** | **21.28** | **284.4** | **6.179** | ***** |
| #1 | .0155 | .7847 | 21.39 | 21.27 | 284.8 | 6.198 | 7315. |
| #2 | .0167 | .7700 | 21.50 | 21.29 | 283.9 | 6.160 | 7298. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **129110.** | **2663.4** | **1540.0** |
| #1 | 128950. | 2681.1 | 1542.8 |
| #2 | 129260. | 2645.7 | 1537.3 |

Sample Name: K1008857-001D Acquired: 9/11/2010 11:50:03 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **461.9** | **-.0039** | **.2131** | **.0769** | **.0761** | **639.1** | **3.979** | **.1242** | **4.935** |
| #1 | 461.7 | .0025 | .2043 | .0767 | .0758 | 643.8 | 3.964 | .1213 | 4.904 |
| #2 | 462.1 | -.0103 | .2218 | .0770 | .0765 | 634.4 | 3.995 | .1272 | 4.966 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **5.777** | **656.4** | **3.282** | **534.1** | **20.23** | **.0028** | **.4887** | **.0106** | **.6798** |
| #1 | 5.813 | 660.2 | 3.264 | 533.0 | 20.18 | .0012 | .4876 | .0108 | .6735 |
| #2 | 5.742 | 652.7 | 3.300 | 535.2 | 20.28 | .0044 | .4899 | .0103 | .6861 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **19.27** | **18.92** | **157.4** | **5.039** | ***** |
| #1 | 19.19 | 18.92 | 157.0 | 5.035 | 7227. |
| #2 | 19.34 | 18.91 | 157.9 | 5.044 | 7180. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **127330.** | **2625.2** | **1533.4** |
| #1 | 127580. | 2601.2 | 1540.3 |
| #2 | 127090. | 2649.2 | 1526.6 |

Sample Name: K1008857-001L Acquired: 9/11/2010 11:53:12 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **112.4** | **-.0125** | **.0590** | **.0175** | **.0159** | **147.2** | **.9582** | **.0303** | **1.309** |
| #1 | 111.5 | -.0197 | .0894 | .0179 | .0157 | 146.5 | .9667 | .0323 | 1.309 |
| #2 | 113.3 | -.0053 | .0286 | .0172 | .0161 | 147.9 | .9496 | .0283 | 1.309 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **1.509** | **159.0** | **.7465** | **122.4** | **4.712** | **-.0012** | **.1239** | **.0015** | **.1525** |
| #1 | 1.517 | 158.5 | .7487 | 122.1 | 4.734 | -.0020 | .1205 | .0024 | .1512 |
| #2 | 1.501 | 159.4 | .7442 | 122.6 | 4.689 | -.0003 | .1272 | .0007 | .1539 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **4.451** | **4.393** | **56.73** | **1.323** | ***** |
| #1 | 4.452 | 4.388 | 56.16 | 1.324 | 6966. |
| #2 | 4.451 | 4.398 | 57.30 | 1.322 | 6960. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 122630. | 2499.1 | 1557.1 |
| #1 | 122110. | 2502.6 | 1559.5 |
| #2 | 123150. | 2495.6 | 1554.7 |

Sample Name: K1008857-001S Acquired: 9/11/2010 11:56:13 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **789.7** | **-.0192** | **34.55** | **11.15** | **10.89** | **973.7** | **13.69** | **20.05** | **15.33** |
| #1 | 790.0 | -.0230 | 34.49 | 11.08 | 10.82 | 972.4 | 13.66 | 19.95 | 15.24 |
| #2 | 789.4 | -.0154 | 34.61 | 11.21 | 10.95 | 975.0 | 13.72 | 20.16 | 15.42 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **17.29** | **768.6** | **15.24** | **1131.** | **41.00** | **.0042** | **21.40** | **6.229** | **23.00** |
| #1 | 17.30 | 769.1 | 15.15 | 1131. | 40.91 | .0048 | 21.29 | 6.250 | 22.96 |
| #2 | 17.28 | 768.2 | 15.33 | 1132. | 41.10 | .0036 | 21.51 | 6.209 | 23.04 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **40.93** | **40.20** | **275.6** | **6.112** | ***** |
| #1 | 40.67 | 40.16 | 274.7 | 6.100 | 7299. |
| #2 | 41.19 | 40.25 | 276.5 | 6.124 | 7253. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 128940. | 2596.3 | 1530.7 |
| #1 | 128980. | 2597.5 | 1537.7 |
| #2 | 128910. | 2595.1 | 1523.6 |

Sample Name: K1008857-002 Acquired: 9/11/2010 11:59:32 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **689.9** | **-.0082** | **.1851** | **.2154** | **.2099** | **720.6** | **5.969** | **.4529** | **11.11** |
| #1 | 694.7 | -.0180 | .1634 | .2151 | .2093 | 721.9 | 5.976 | .4500 | 11.07 |
| #2 | 685.2 | .0016 | .2068 | .2156 | .2105 | 719.3 | 5.963 | .4558 | 11.15 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | Ag3280 | V_2924 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **12.12** | **282.8** | **10.65** | **205.1** | **35.59** | **.0018** | **2.126** | **.0831** | **1.677** |
| #1 | 12.17 | 282.7 | 10.61 | 205.6 | 35.35 | .0023 | 2.122 | .0856 | 1.681 |
| #2 | 12.08 | 282.9 | 10.69 | 204.5 | 35.83 | .0012 | 2.131 | .0807 | 1.673 |

| Elem | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **31.76** | **31.28** | **154.1** | **4.078** | ***** |
| #1 | 31.63 | 31.26 | 154.4 | 4.084 | 7366. |
| #2 | 31.89 | 31.29 | 153.8 | 4.073 | 7341. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 130820. | 2694.0 | 1545.0 |
| #1 | 131180. | 2688.4 | 1548.7 |
| #2 | 130460. | 2699.5 | 1541.2 |

Sample Name: K1009102-MB Acquired: 9/11/2010 12:03:36 Type: Unk
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1301** | **.0041** | **.0361** | **.0000** | **-.0007** | **.6765** | **-.0147** | **-.0029** |
| #1 | .1229 | -.0045 | .0326 | .0000 | -.0012 | .5637 | -.0065 | -.0042 |
| #2 | .1373 | .0126 | .0396 | -.0001 | -.0002 | .7893 | -.0228 | -.0015 |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0749** | **.0782** | **.1317** | **.0071** | **.0822** | **.0016** | **-.0010** | **.0009** |
| #1 | .0763 | .0892 | .1175 | .0082 | .0124 | .0026 | .0005 | .0021 |
| #2 | .0735 | .0672 | .1459 | .0060 | .1520 | .0006 | -.0025 | -.0003 |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **.0056** | **-.0050** | F **2.772** | F **2.728** | **.2452** | **-.0050** | ***** |
| #1 | .0078 | -.0006 | 2.762 | 2.725 | .5167 | -.0088 | 6873. |
| #2 | .0033 | -.0094 | 2.782 | 2.730 | -.0262 | -.0012 | 6841. |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 120630. | 2483.6 | 1548.4 |
| #1 | 122020. | 2479.8 | 1551.7 |
| #2 | 119240. | 2487.4 | 1545.1 |

Sample Name: CCVA5 Acquired: 9/11/2010 12:06:36 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **9.210** | **2.087** | **3.406** | **2.254** | **2.211** | **6.082** | **4.888** | **4.067** |
| Stddev | .016 | .017 | .014 | .011 | .012 | .088 | .017 | .021 |
| %RSD | .1703 | .8269 | .4185 | .4832 | .5403 | 1.443 | .3415 | .5079 |
| #1 | 9.199 | 2.075 | 3.416 | 2.262 | 2.219 | 6.144 | 4.900 | 4.082 |
| #2 | 9.222 | 2.100 | 3.396 | 2.247 | 2.202 | 6.020 | 4.876 | 4.053 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **3.809** | **3.944** | **4.314** | **1.190** | **11.46** | **9.026** | **4.287** | F **3.690** |
| Stddev | .025 | .001 | .011 | .008 | .38 | .099 | .011 | .011 |
| %RSD | .6586 | .0189 | .2590 | .6932 | 3.341 | 1.101 | .2528 | .2994 |
| #1 | 3.827 | 3.943 | 4.306 | 1.196 | 11.19 | 9.096 | 4.295 | 3.682 |
| #2 | 3.791 | 3.944 | 4.322 | 1.184 | 11.74 | 8.956 | 4.279 | 3.698 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Fail |
| High Limit | | | | | | | | 4.550 |
| Low Limit | | | | | | | | -10.00% |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **2.618** | **4.251** | **2.486** | **4.687** | **3.994** | **3.949** | **3.858** | **5.185** |
| Stddev | .012 | .019 | .008 | .010 | .010 | .007 | .403 | .011 |
| %RSD | .4734 | .4510 | .3290 | .2067 | .2419 | .1756 | 10.44 | .2055 |
| #1 | 2.626 | 4.264 | 2.481 | 4.694 | 4.001 | 3.954 | 4.143 | 5.193 |
| #2 | 2.609 | 4.237 | 2.492 | 4.680 | 3.987 | 3.944 | 3.573 | 5.178 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCVA5 Acquired: 9/11/2010 12:06:36 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| | |
| #1 | 6855. |
| #2 | 6905. |
| | |
| Check ? | None |
| High Limit | |
| Low Limit | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 123220. | 2499.8 | 1559.7 |
| Stddev | 325. | 8.9 | 5.1 |
| %RSD | .26336 | .35492 | .32804 |
| | | | |
| #1 | 122990. | 2493.5 | 1556.0 |
| #2 | 123450. | 2506.0 | 1563.3 |

Sample Name: CCVB5 Acquired: 9/11/2010 12:09:27 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/LR | umol/L | umol/L | umol/L | umol/L | umol/LR | umol/L | umol/L |
| Avg | **376.0** | **-.0051** | **13.67** | **-.0001** | **.0004** | **253.6** | **-.0012** | **-.0008** |
| Stddev | .6 | .0163 | .03 | .0001 | .0000 | .8 | .0069 | .0025 |
| %RSD | .1471 | 322.3 | .2301 | 119.9 | 5.523 | .3021 | 552.1 | 330.0 |
| #1 | 375.6 | -.0166 | 13.64 | -.0002 | .0004 | 253.1 | .0036 | -.0025 |
| #2 | 376.3 | .0065 | 13.69 | .0000 | .0004 | 254.2 | -.0061 | .0010 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **-.1268** | **-.0010** | **170.8** | **.0033** | **411.9** | F **363.9** | **17.26** | **15.12** |
| Stddev | .0016 | .0121 | .9 | .0054 | .3 | .4 | .03 | .02 |
| %RSD | 1.301 | 1227. | .5094 | 161.5 | .0773 | .1142 | .1637 | .1113 |
| #1 | -.1257 | -.0096 | 170.2 | -.0005 | 412.1 | 364.2 | 17.24 | 15.11 |
| #2 | -.1280 | .0076 | 171.4 | .0071 | 411.7 | 363.6 | 17.28 | 15.13 |
| Check ? | None | None | Chk Pass | None | Chk Pass | Chk Fail | None | None |
| Value | | | | | | 411.4 | | |
| Range | | | | | | -10.00% | | |

| Elem | Mo2020 | Ni2216 | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0013** | **-.0060** | **-.0055** | **.0201** | **.0008** | **.0027** | F **291.1** | **-.0012** |
| Stddev | .0017 | .0007 | .0026 | .0044 | .0023 | .0006 | .4 | .0020 |
| %RSD | 129.5 | 11.75 | 47.01 | 21.80 | 286.3 | 20.87 | .1229 | 168.2 |
| #1 | .0001 | -.0065 | -.0073 | .0170 | .0024 | .0031 | 290.8 | -.0026 |
| #2 | .0025 | -.0055 | -.0037 | .0232 | -.0008 | .0023 | 291.3 | .0002 |
| Check ? | None | None | None | None | None | None | Chk Fail | None |
| Value | | | | | | | 356.0 | |
| Range | | | | | | | -10.00% | |

Sample Name: CCVB5 Acquired: 9/11/2010 12:09:27 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Y_2243 |
|---|---|
| Units | Cts/S |
| Avg | ***** |
| Stddev | ----- |
| %RSD | ----- |
| #1 | 6916. |
| #2 | 6824. |
| Check ? | None |
| Value | |
| Range | |

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 121940. | 2480.2 | 1546.1 |
| Stddev | 77. | 2.1 | 17.7 |
| %RSD | .06343 | .08522 | 1.1475 |
| #1 | 122000. | 2478.7 | 1558.7 |
| #2 | 121890. | 2481.7 | 1533.6 |

Sample Name: CCB5 Acquired: 9/11/2010 12:12:37 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Elem | Al3944 | Sb2068 | As1890 | Cd2144 | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.1220** | **.0053** | **.0287** | **.0003** | **-.0007** | **.1489** | **-.0131** | **-.0049** | **.0034** |
| Stddev | .0085 | .0041 | .0017 | .0000 | .0001 | .2278 | .0115 | .0047 | .0076 |
| %RSD | 6.962 | 77.10 | 5.805 | 13.14 | 13.03 | 153.0 | 87.38 | 96.86 | 223.1 |
| #1 | .1280 | .0024 | .0299 | .0003 | -.0007 | -.0122 | -.0050 | -.0082 | .0087 |
| #2 | .1160 | .0082 | .0275 | .0003 | -.0008 | .3100 | -.0212 | -.0015 | -.0020 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L |
| Avg | **.0024** | **.1078** | **.0023** | **.6947** | **-.1296** | **.0011** | **-.0250** | **-.0023** | **-.0022** |
| Stddev | .0184 | .0049 | .0070 | .2519 | .1678 | .0012 | .0348 | .0025 | .0009 |
| %RSD | 762.3 | 4.578 | 309.8 | 36.26 | 129.5 | 106.4 | 139.1 | 110.1 | 38.92 |
| #1 | .0155 | .1043 | .0072 | .5166 | -.2483 | .0020 | -.0497 | -.0005 | -.0016 |
| #2 | -.0106 | .1112 | -.0027 | .8729 | -.0109 | .0003 | -.0004 | -.0041 | -.0029 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

| Elem | Ag3280 | V_2924 | Zn2062 | Zn2138 | Si2516 | Ti3361 | Y_2243 |
|---|---|---|---|---|---|---|---|
| Units | umol/L | umol/L | umol/L | umol/L | umol/L | umol/L | Cts/S |
| Avg | **-.0060** | **-.0068** | **-.0005** | **.0000** | **-.5424** | **-.0068** | ***** |
| Stddev | .0064 | .0120 | .0019 | .0007 | .0131 | .0046 | ----- |
| %RSD | 105.9 | 176.5 | 389.8 | 1813. | 2.406 | 67.52 | ----- |
| #1 | -.0105 | .0017 | -.0018 | -.0004 | -.5332 | -.0101 | 6875. |
| #2 | -.0015 | -.0153 | .0009 | .0005 | -.5517 | -.0036 | 6799. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB5 Acquired: 9/11/2010 12:12:37 Type: QC
Method: 2010CSEM(v3) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 091110A

| Int. Std. | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 121900. | 2464.5 | 1533.5 |
| Stddev | 50. | 14.8 | 13.1 |
| %RSD | .04079 | .59908 | .85122 |
| | | | |
| #1 | 121870. | 2474.9 | 1542.7 |
| #2 | 121940. | 2454.1 | 1524.2 |

# Columbia Analytical Services

## - Cover Page -
## INORGANIC ANALYSIS DATA PACKAGE

**Client:** Windward Environmental, LLC
**Project Name:** Passaic RI/FS Sediment
**Project No.:** Task 18.8.1

**Service Request:** K1008857

| Sample Name: | Lab Code: |
|---|---|
| **Batch QC1D** | **K1008775-001D** |
| **Batch QC1S** | **K1008775-001S** |
| **LPRC07C** | **K1008857-001** |
| **LPRC07CD** | **K1008857-001D** |
| **LPRC07CS** | **K1008857-001S** |
| **LPRC13A** | **K1008857-002** |
| **LPRC13AD** | **K1008857-002D** |
| **LPRC13AS** | **K1008857-002S** |
| **Method Blank** | **K1008857-MB** |

**Comments:**

**Approved By:** _____ **Date:** 9/29/10

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | 08/16/10 |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Matrix:** | SEDIMENT | **Units:** | mg/Kg |
| | | **Basis:** | DRY |

**Sample Name:** LPRC07C **Lab Code:** K1008857-001

| Analyte | Analysis Method | LOQ | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6010B | 10.7 | 0.4 | 2.0 | 09/01/10 | 09/07/10 | 7290 | | |
| Antimony | 6020 | 0.054 | 0.010 | 5.0 | 09/01/10 | 09/03/10 | 0.316 | | |
| Arsenic | 6020 | 0.53 | 0.05 | 5.0 | 09/01/10 | 09/07/10 | 2.20 | | |
| Barium | 6010B | 2.15 | 0.06 | 2.0 | 09/01/10 | 09/07/10 | 63.3 | | |
| Beryllium | 6020 | 0.021 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.236 | | |
| Cadmium | 6020 | 0.021 | 0.004 | 5.0 | 09/01/10 | 09/07/10 | 0.783 | | |
| Calcium | 6010B | 10.7 | 2.2 | 2.0 | 09/01/10 | 09/07/10 | 4200 | | N |
| Chromium | 6020 | 0.21 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 22.5 | | |
| Cobalt | 6020 | 0.021 | 0.001 | 5.0 | 09/01/10 | 09/07/10 | 3.120 | | |
| Copper | 6020 | 0.11 | 0.09 | 5.0 | 09/01/10 | 09/07/10 | 36.6 | | |
| Iron | 6010B | 4.3 | 0.8 | 2.0 | 09/01/10 | 09/07/10 | 16400 | | |
| Lead | 6020 | 0.053 | 0.006 | 5.0 | 09/01/10 | 09/07/10 | 114 | | |
| Magnesium | 6010B | 4.3 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 5330 | | |
| Manganese | 6010B | 2.15 | 0.02 | 2.0 | 09/01/10 | 09/07/10 | 222 | | |
| Nickel | 6020 | 0.21 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 10.1 | | |
| Potassium | 6010B | 86 | 22 | 2.0 | 09/01/10 | 09/07/10 | 996 | | N |
| Selenium | 7742 | 0.11 | 0.03 | 2.0 | 09/01/10 | 09/24/10 | 0.16 | | |
| Silver | 6020 | 0.021 | 0.009 | 5.0 | 09/01/10 | 09/03/10 | 0.805 | | |
| Sodium | 6010B | 43 | 4.3 | 2.0 | 09/01/10 | 09/07/10 | 1510 | | |
| Thallium | 6020 | 0.021 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.063 | | |
| Titanium | 6010B | 1.76 | 0.05 | 2.0 | 09/23/10 | 09/23/10 | 282 | | |
| Vanadium | 6010B | 2.2 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 20.8 | | |
| Zinc | 6010B | 2.2 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 220 | | |

**% Solids:** 66.1

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | 08/16/10 |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Matrix:** | SEDIMENT | **Units:** | mg/Kg |
| | | **Basis:** | DRY |

**Sample Name:** LPRC13A **Lab Code:** K1008857-002

| Analyte | Analysis Method | LOQ | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6010B | 11.3 | 0.5 | 2.0 | 09/01/10 | 09/07/10 | 8310 | | |
| Antimony | 6020 | 0.057 | 0.010 | 5.0 | 09/01/10 | 09/03/10 | 0.451 | | |
| Arsenic | 6020 | 0.57 | 0.06 | 5.0 | 09/01/10 | 09/07/10 | 3.05 | | |
| Barium | 6010B | 2.27 | 0.07 | 2.0 | 09/01/10 | 09/07/10 | 116 | | |
| Beryllium | 6020 | 0.023 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.381 | | |
| Cadmium | 6020 | 0.023 | 0.005 | 5.0 | 09/01/10 | 09/07/10 | 2.420 | | |
| Calcium | 6010B | 11.3 | 2.3 | 2.0 | 09/01/10 | 09/07/10 | 2480 | | N |
| Chromium | 6020 | 0.23 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 65.1 | | |
| Cobalt | 6020 | 0.023 | 0.001 | 5.0 | 09/01/10 | 09/07/10 | 5.340 | | |
| Copper | 6020 | 0.11 | 0.09 | 5.0 | 09/01/10 | 09/07/10 | 77.6 | | |
| Iron | 6010B | 4.5 | 0.8 | 2.0 | 09/01/10 | 09/07/10 | 15600 | | |
| Lead | 6020 | 0.057 | 0.007 | 5.0 | 09/01/10 | 09/07/10 | 211 | | |
| Magnesium | 6010B | 4.5 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 2390 | | |
| Manganese | 6010B | 2.27 | 0.02 | 2.0 | 09/01/10 | 09/07/10 | 655 | | |
| Nickel | 6020 | 0.23 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 19.5 | | |
| Potassium | 6010B | 91 | 23 | 2.0 | 09/01/10 | 09/07/10 | 633 | | N |
| Selenium | 7742 | 0.11 | 0.03 | 2.0 | 09/01/10 | 09/24/10 | 0.35 | | |
| Silver | 6020 | 0.023 | 0.009 | 5.0 | 09/01/10 | 09/03/10 | 2.940 | | |
| Sodium | 6010B | 45 | 4.5 | 2.0 | 09/01/10 | 09/07/10 | 230 | | |
| Thallium | 6020 | 0.023 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.064 | | |
| Titanium | 6010B | 1.69 | 0.05 | 2.0 | 09/23/10 | 09/23/10 | 246 | | |
| Vanadium | 6010B | 2.3 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 25.6 | | |
| Zinc | 6010B | 2.3 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 314 | | |

**% Solids:** 72.9

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | |
| **Matrix:** | SEDIMENT | **Units:** | mg/Kg |
| | | **Basis:** | DRY |

**Sample Name:** Method Blank **Lab Code:** K1008857-MB

| Analyte | Analysis Method | LOQ | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6010B | 10.0 | 0.4 | 2.0 | 09/01/10 | 09/07/10 | 0.5 | J | |
| Antimony | 6020 | 0.050 | 0.009 | 5.0 | 09/01/10 | 09/03/10 | 0.009 | U | |
| Arsenic | 6020 | 0.50 | 0.05 | 5.0 | 09/01/10 | 09/07/10 | 0.05 | U | |
| Barium | 6010B | 2.00 | 0.06 | 2.0 | 09/01/10 | 09/07/10 | 0.06 | U | |
| Beryllium | 6020 | 0.020 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.003 | U | |
| Cadmium | 6020 | 0.020 | 0.004 | 5.0 | 09/01/10 | 09/07/10 | 0.004 | U | |
| Calcium | 6010B | 10.0 | 2.0 | 2.0 | 09/01/10 | 09/07/10 | 2.0 | U | N |
| Chromium | 6020 | 0.20 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 0.03 | J | |
| Cobalt | 6020 | 0.020 | 0.001 | 5.0 | 09/01/10 | 09/07/10 | 0.003 | J | |
| Copper | 6020 | 0.10 | 0.08 | 5.0 | 09/01/10 | 09/07/10 | 0.08 | U | |
| Iron | 6010B | 4.0 | 0.7 | 2.0 | 09/01/10 | 09/07/10 | 0.7 | U | |
| Lead | 6020 | 0.050 | 0.006 | 5.0 | 09/01/10 | 09/07/10 | 0.037 | J | |
| Magnesium | 6010B | 4.0 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 0.3 | U | |
| Manganese | 6010B | 2.00 | 0.02 | 2.0 | 09/01/10 | 09/07/10 | 0.02 | U | |
| Nickel | 6020 | 0.20 | 0.02 | 5.0 | 09/01/10 | 09/07/10 | 0.02 | J | |
| Potassium | 6010B | 80 | 20 | 2.0 | 09/01/10 | 09/07/10 | 20 | U | N |
| Selenium | 7742 | 0.10 | 0.03 | 2.0 | 09/01/10 | 09/24/10 | 0.03 | U | |
| Silver | 6020 | 0.020 | 0.008 | 5.0 | 09/01/10 | 09/03/10 | 0.008 | U | |
| Sodium | 6010B | 40 | 4.0 | 2.0 | 09/01/10 | 09/07/10 | 18 | J | |
| Thallium | 6020 | 0.020 | 0.003 | 5.0 | 09/01/10 | 09/07/10 | 0.003 | U | |
| Titanium | 6010B | 2.00 | 0.06 | 2.0 | 09/23/10 | 09/23/10 | 0.06 | U | |
| Vanadium | 6010B | 2.0 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 0.3 | U | |
| Zinc | 6010B | 2.0 | 0.3 | 2.0 | 09/01/10 | 09/07/10 | 0.3 | U | |

**% Solids:** 100.0

Comments:

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | 5000 | 5051 | 101 | 10000 | 9974 | 100 | 9791 | 98 | 6010B |
| Antimony | 25.0 | 25.0 | 100 | 25.0 | 25.3 | 101 | 25.1 | 100 | 6020 |
| Arsenic | 25.0 | 24.4 | 98 | 25.0 | 25.2 | 101 | 24.6 | 98 | 6020 |
| Barium | 5000 | 5092 | 102 | 10000 | 10020 | 100 | 9995 | 100 | 6010B |
| Beryllium | 2.5 | 2.4 | 96 | 25.0 | 25.0 | 100 | 25.6 | 102 | 6020 |
| Cadmium | 12.5 | 12.4 | 99 | 25.0 | 25.0 | 100 | 25.2 | 101 | 6020 |
| Calcium | 12500 | 12650 | 101 | 10000 | 10010 | 100 | 9889 | 99 | 6010B |
| Chromium | 10.0 | 9.5 | 95 | 25.0 | 24.7 | 99 | 24.3 | 97 | 6020 |
| Cobalt | 25.0 | 24.0 | 96 | 25.0 | 24.7 | 99 | 24.5 | 98 | 6020 |
| Copper | 12.5 | 12.2 | 98 | 25.0 | 25.0 | 100 | 24.6 | 98 | 6020 |
| Iron | 2500 | 2547 | 102 | 10000 | 10040 | 100 | 9921 | 99 | 6010B |
| Lead | 25.0 | 24.4 | 98 | 25.0 | 25.1 | 100 | 25.2 | 101 | 6020 |
| Magnesium | 12500 | 12730 | 102 | 10000 | 10220 | 102 | 10350 | 104 | 6010B |
| Magnesium | 12500 | 12630 | 101 | 10000 | 9909 | 99 | 9795 | 98 | 6010B |
| Manganese | 1250 | 1248 | 100 | 250 | 244 | 98 | 243 | 97 | 6010B |
| Nickel | 25.0 | 24.0 | 96 | 25.0 | 24.8 | 99 | 24.5 | 98 | 6020 |
| Potassium | 12500 | 12560 | 100 | 10000 | 10170 | 102 | 10540 | 105 | 6010B |
| Selenium | 7.5 | 7.60 | 101 | 7.5 | 7.54 | 101 | 7.58 | 101 | 7742 |
| Silver | 12.5 | 13.4 | 107 | 25.0 | 25.0 | 100 | 25.1 | 100 | 6020 |
| Sodium | 12500 | 12540 | 100 | 10000 | 10250 | 102 | 10590 | 106 | 6010B |
| Thallium | 25.0 | 25.0 | 100 | 25.0 | 24.9 | 100 | 25.0 | 100 | 6020 |
| Titanium | 2000 | 2052 | 103 | 250 | 254 | 102 | 249 | 100 | 6010B |
| Vanadium | 1250 | 1262 | 101 | 250 | 246 | 98 | 245 | 98 | 6010B |
| Zinc | 1250 | 1227 | 98 | 250 | 251 | 100 | 251 | 100 | 6010B |

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | 10000 | 10110 | 101 | 10060 | 101 | 6010B |
| Antimony | | | | 25.0 | 25.1 | 100 | 24.9 | 100 | 6020 |
| Arsenic | | | | 25.0 | 25.0 | 100 | | | 6020 |
| Barium | | | | 10000 | 9993 | 100 | 10100 | 101 | 6010B |
| Beryllium | | | | 25.0 | 24.3 | 97 | | | 6020 |
| Cadmium | | | | 25.0 | 25.2 | 101 | | | 6020 |
| Calcium | | | | 10000 | 9807 | 98 | 9914 | 99 | 6010B |
| Chromium | | | | 25.0 | 24.1 | 96 | | | 6020 |
| Cobalt | | | | 25.0 | 24.2 | 97 | | | 6020 |
| Copper | | | | 25.0 | 24.5 | 98 | | | 6020 |
| Iron | | | | 10000 | 9882 | 99 | 9910 | 99 | 6010B |
| Lead | | | | 25.0 | 25.0 | 100 | | | 6020 |
| Magnesium | | | | 10000 | 10250 | 102 | 10280 | 103 | 6010B |
| Manganese | | | | 250 | 241 | 96 | 240 | 96 | 6010B |
| Nickel | | | | 25.0 | 24.3 | 97 | | | 6020 |
| Potassium | | | | 10000 | 10320 | 103 | 10360 | 104 | 6010B |
| Selenium | | | | 7.5 | 7.61 | 101 | 7.12 | 95 | 7742 |
| Silver | | | | 25.0 | 25.0 | 100 | 25.2 | 101 | 6020 |
| Sodium | | | | 10000 | 10410 | 104 | 10420 | 104 | 6010B |
| Thallium | | | | 25.0 | 25.3 | 101 | | | 6020 |
| Titanium | | | | 250 | 251 | 100 | 254 | 102 | 6010B |
| Vanadium | | | | 250 | 243 | 97 | 243 | 97 | 6010B |
| Zinc | | | | 250 | 251 | 100 | 251 | 100 | 6010B |

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | 10000 | 10010 | 100 | | | 6010B |
| Antimony | | | | 25.0 | 24.7 | 99 | | | 6020 |
| Barium | | | | 10000 | 9895 | 99 | | | 6010B |
| Calcium | | | | 10000 | 9732 | 97 | | | 6010B |
| Iron | | | | 10000 | 9720 | 97 | | | 6010B |
| Magnesium | | | | 10000 | 10080 | 101 | | | 6010B |
| Manganese | | | | 250 | 240 | 96 | | | 6010B |
| Potassium | | | | 10000 | 10040 | 100 | | | 6010B |
| Selenium | | | | 7.5 | 7.39 | 99 | 7.40 | 99 | 7742 |
| Silver | | | | 25.0 | 25.1 | 100 | | | 6020 |
| Sodium | | | | 10000 | 10250 | 102 | | | 6010B |
| Titanium | | | | 250 | 250 | 100 | | | 6010B |
| Vanadium | | | | 250 | 243 | 97 | | | 6010B |
| Zinc | | | | 250 | 247 | 99 | | | 6010B |

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICV Source:** Inorganic Ventures **CCV Source:** CAS MIXED

**Concentration Units:** ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Selenium | | | | 7.5 | 7.43 | 99 | 7.23 | 96 | 7742 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICV Source:** Inorganic Ventures **CCV Source:** CAS MIXED

**Concentration Units:** ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Selenium | | | | 7.5 | 7.14 | 95 | 7.17 | 96 | 7742 |

# Metals
## - 2b -
## CRDL STANDARD FOR AA AND ICP

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Aluminum | | | | 50.0 | 49.6 | 99 | | |
| Antimony | | | | 0.10 | 0.11 | 110 | | |
| Arsenic | | | | 1.00 | 0.99 | 99 | | |
| Barium | | | | 5.0 | 2.3 | 46 | | |
| Beryllium | | | | 0.040 | 0.042 | 105 | | |
| Cadmium | | | | 0.04 | 0.042 | 105 | | |
| Calcium | | | | 50.0 | 40.3 | 81 | | |
| Chromium | | | | 0.4 | 0.39 | 98 | | |
| Cobalt | | | | 0.04 | 0.04 | 100 | | |
| Copper | | | | 0.2 | 0.37 | 185 | | |
| Iron | | | | 20.0 | 22.8 | 114 | | |
| Lead | | | | 0.10 | 0.11 | 110 | | |
| Magnesium | | | | 20.0 | 20.7 | 104 | | |
| Manganese | | | | 5.0 | 4.8 | 96 | | |
| Nickel | | | | 0.4 | 0.51 | 128 | | |
| Potassium | | | | 400.0 | 446.3 | 112 | | |
| Selenium | 0.5 | 0.42 | 84 | | | | | |
| Silver | | | | 0.040 | 0.042 | 105 | | |
| Sodium | | | | 200.0 | 227.3 | 114 | | |
| Thallium | | | | 0.04 | 0.043 | 108 | | |
| Titanium | | | | 10.0 | 10.5 | 105 | | |
| Vanadium | | | | 10.0 | 9.9 | 99 | | |
| Zinc | | | | 10.0 | 9.9 | 99 | | |

# Metals



## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | -2.2 | J | -2.8 | J | 5.6 | J | 2.1 | J | 6010B |
| Antimony | 0.031 | J | 0.018 | U | 0.018 | U | 0.018 | U | 6020 |
| Arsenic | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 6020 |
| Barium | -2.90 | J | -2.30 | J | -1.20 | J | -1.60 | J | 6010B |
| Beryllium | 0.006 | U | 0.006 | U | 0.006 | U | 0.008 | J | 6020 |
| Cadmium | 0.008 | U | 0.008 | U | 0.008 | U | 0.008 | U | 6020 |
| Calcium | 10.0 | U | -11.6 | J | 10.0 | U | 10.0 | U | 6010B |
| Chromium | 0.03 | U | 0.03 | U | -0.04 | J | -0.05 | J | 6020 |
| Cobalt | 0.002 | U | 0.002 | U | 0.002 | J | 0.006 | J | 6020 |
| Copper | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U | 6020 |
| Iron | 3.5 | U | -4.3 | J | 4.1 | J | 6.8 | J | 6010B |
| Lead | 0.012 | U | 0.012 | U | 0.012 | U | 0.012 | U | 6020 |
| Magnesium | 1.5 | U | 1.5 | U | 1.5 | U | 2.2 | J | 6010B |
| Manganese | 0.10 | U | 0.20 | J | 0.10 | U | 0.10 | U | 6010B |
| Nickel | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 6020 |
| Potassium | 100 | U | 100 | U | 100 | U | 100 | U | 6010B |
| Selenium | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 7742 |
| Silver | 0.016 | U | 0.016 | U | 0.016 | U | 0.016 | U | 6020 |
| Sodium | 20.0 | U | 53.5 | J | 55.6 | J | 61.4 | J | 6010B |
| Thallium | 0.006 | U | 0.007 | J | 0.006 | U | 0.011 | J | 6020 |
| Titanium | 0.3 | U | 0.3 | U | 0.3 | U | 0.3 | U | 6010B |
| Vanadium | 1.5 | U | 1.5 | U | 1.5 | U | 1.5 | U | 6010B |
| Zinc | 1.50 | U | 1.50 | U | 1.50 | U | 1.50 | U | 6010B |

# Metals



## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | 2.0 | U | 2.2 | J | | | 6010B |
| Antimony | | | 0.018 | U | 0.018 | U | | | 6020 |
| Barium | | | -1.10 | J | -1.50 | J | | | 6010B |
| Calcium | | | -18.2 | J | 10.0 | U | | | 6010B |
| Iron | | | 5.6 | J | 3.5 | U | | | 6010B |
| Magnesium | | | 2.5 | J | 3.5 | J | | | 6010B |
| Manganese | | | 0.10 | J | 0.10 | J | | | 6010B |
| Potassium | | | 100 | U | 100 | U | | | 6010B |
| Selenium | | | 0.1 | U | 0.1 | J | 0.1 | U | 7742 |
| Silver | | | 0.016 | U | 0.016 | U | | | 6020 |
| Sodium | | | 60.5 | J | 60.9 | J | | | 6010B |
| Titanium | | | 0.4 | J | 0.3 | U | | | 6010B |
| Vanadium | | | 1.5 | U | 1.5 | U | | | 6010B |
| Zinc | | | 1.50 | U | 1.50 | U | | | 6010B |

# Metals



## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | | | 0.1 | U | 0.1 | U | 0.1 | U | 7742 |

# Metals

- 3 -

## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | | | 0.1 | U | | | | | 7742 |

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Aluminum | 500000 | 500000 | 489000 | 489100 | 98 | | | |
| Barium | | 500 | -2 | 539 | 108 | | | |
| Calcium | 500000 | 500000 | 489100 | 488800 | 98 | | | |
| Iron | 200000 | 200000 | 197100 | 197400 | 99 | | | |
| Magnesium | 500000 | 500000 | 429400 | 436500 | 87 | | | |
| Manganese | | 500 | 19 | 520 | 104 | | | |
| Potassium | | | 47 | -9 | | | | |
| Sodium | | | 94 | 113 | | | | |
| Vanadium | | 500 | 2 | 526 | 105 | | | |
| Zinc | | 1000 | -2 | 950 | 95 | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-AES-03 **ICS Source:** Inorganic Ventures

**Concentration Units:** ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Titanium | | | 5 | 5 | | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Arsenic | 0.0 | 25.0 | 0.0 | 26.3 | 105 | | | |
| Beryllium | 0.0 | | 0.0 | 0.0 | | | | |
| Cadmium | 0.0 | 25.0 | 0.4 | 25.7 | 103 | | | |
| Chromium | 0.0 | 50.0 | 0.6 | 48.0 | 96 | | | |
| Cobalt | 0.0 | 50.0 | 0.8 | 49.4 | 99 | | | |
| Copper | 0.0 | 50.0 | 0.8 | 47.6 | 95 | | | |
| Lead | 0.0 | | 0.1 | 0.1 | | | | |
| Nickel | 0.0 | 50.0 | 2.2 | 48.6 | 97 | | | |
| Thallium | 0.0 | | 0.0 | 0.0 | | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-MS-02 **ICS Source:** Inorganic Ventures

**Concentration Units:** ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Antimony | 0.0 | | 0.1 | 0.1 | | | | |
| Silver | 0.0 | 12.5 | 0.1 | 13.8 | 110 | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Windward Environmental, LLC

Service Request: K1008857

Project No.: Task 18.8.1

Units: MG/KG

Project Name: Passaic RI/FS Sediment

Basis: DRY

Matrix: SEDIMENT

% Solids: 66.1

Sample Name: LPRC07CS

Lab Code: K1008857-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10000 | | 7290 | | 426.16 | 635.9 | | 6010B |
| Antimony | 10 - 120 | 67.9 | | 0.316 | | 106.54 | 63.4 | | 6020 |
| Barium | 79 - 114 | 491 | | 63.3 | | 426.16 | 100.4 | | 6010B |
| Calcium | 75 - 125 | 4700 | | 4200 | | 1065.39 | 46.9 | N | 6010B |
| Iron | | 20200 | | 16400 | | 213.08 | 1783.4 | | 6010B |
| Magnesium | | 6010 | | 5330 | | 1065.39 | 63.8 | | 6010B |
| Manganese | 28 - 181 | 372 | | 222 | | 106.54 | 140.8 | | 6010B |
| Potassium | 75 - 125 | 2610 | | 996 | | 1065.39 | 151.5 | N | 6010B |
| Silver | 75 - 121 | 11.2 | | 0.805 | | 10.65 | 97.6 | | 6020 |
| Sodium | 75 - 125 | 2700 | | 1510 | | 1065.39 | 111.7 | | 6010B |
| Titanium | 75 - 125 | 787 | | 282 | | 458.44 | 110.2 | | 6010B |
| Vanadium | 64 - 132 | 124 | | 20.8 | | 106.54 | 96.9 | | 6010B |
| Zinc | 44 - 132 | 330 | | 220 | | 106.54 | 103.2 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Units:** | MG/KG |
| **Project Name:** | Passaic RI/FS Sediment | **Basis:** | DRY |
| **Matrix:** | SEDIMENT | **% Solids:** | 72.9 |

**Sample Name:** LPRC13AS **Lab Code:** K1008857-002S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 57 - 134 | 2.38 | | 0.35 | | 2.29 | 88.6 | | 7742 |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Windward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: MG/KG
Project Name: Passaic RI/FS Sediment
Basis: DRY
Matrix: SEDIMENT
% Solids: 72.7

Sample Name: Batch QC1S
Lab Code: K1008775-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 78 - 121 | 109 | | 1.29 | | 113.68 | 94.7 | | 6020 |
| Beryllium | 80 - 132 | 11.2 | | 0.047 | | 11.37 | 98.1 | | 6020 |
| Cadmium | 68 - 137 | 11.7 | | 0.031 | | 11.37 | 102.6 | | 6020 |
| Chromium | 48 - 146 | 45.8 | | 3.88 | | 45.47 | 92.2 | | 6020 |
| Cobalt | 74 - 118 | 107 | | 0.922 | | 113.68 | 93.3 | | 6020 |
| Copper | 55 - 144 | 56.9 | | 3.13 | | 56.84 | 94.6 | | 6020 |
| Lead | 72 - 130 | 113 | | 2.100 | | 113.68 | 97.6 | | 6020 |
| Nickel | 59 - 132 | 108 | | 1.64 | | 113.68 | 93.6 | | 6020 |
| Thallium | 84 - 116 | 107 | | 0.065 | | 113.68 | 94.1 | | 6020 |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

**- 5B -**

## POST SPIKE SAMPLE RECOVERY

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1 **Units:** UG/L

**Project Name:** Passaic RI/FS Sediment **Basis:** DRY

**Matrix:** WATER

**Sample Name:** LPRC07CA **Lab Code:** K1008857-001A

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 75 - 125 | 48.39 | | 0.59 | | 50.0 | 96 | | 6020 |
| Silver | 75 - 125 | 11.260 | | 1.500 | | 10.0 | 98 | | 6020 |

*Columbia Analytical Services*

# Metals

- 5B -

## POST SPIKE SAMPLE RECOVERY

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1 **Units:** UG/L

**Project Name:** Passaic RI/FS Sediment **Basis:** DRY

**Matrix:** WATER

**Sample Name:** Batch QC1A **Lab Code:** K1008775-001A

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 75 - 125 | 49.0 | | 2.3 | | 50.0 | 93 | | 6020 |
| Beryllium | 75 - 125 | 47.290 | | 0.083 | | 50.0 | 94 | | 6020 |
| Cadmium | 75 - 125 | 47.230 | | 0.055 | | 50.0 | 94 | | 6020 |
| Chromium | 75 - 125 | 53.07 | | 6.88 | | 50.0 | 92 | | 6020 |
| Cobalt | 75 - 125 | 47.900 | | 1.636 | | 50.0 | 93 | | 6020 |
| Copper | 75 - 125 | 51.34 | | 5.55 | | 50.0 | 92 | | 6020 |
| Lead | 75 - 125 | 51.42 | | 3.73 | | 50.0 | 95 | | 6020 |
| Nickel | 75 - 125 | 48.76 | | 2.91 | | 50.0 | 92 | | 6020 |
| Thallium | 75 - 125 | 49.110 | | 0.116 | | 50.0 | 98 | | 6020 |

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Units:** | MG/KG |
| **Project Name:** | Passaic RI/FS Sediment | **Basis:** | DRY |
| **Matrix:** | SEDIMENT | **% Solids:** | 66.1 |

**Sample Name:** LPRC07CD **Lab Code:** K1008857-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 30 | 7290 | | 7660 | | 4.9 | | 6010B |
| Antimony | 20 | 0.316 | | 0.317 | | 0.3 | | 6020 |
| Barium | 30 | 63.3 | | 67.2 | | 6.0 | | 6010B |
| Calcium | 30 | 4200 | | 4690 | | 11.0 | | 6010B |
| Iron | 30 | 16400 | | 17200 | | 4.8 | | 6010B |
| Magnesium | 30 | 5330 | | 4470 | | 17.6 | | 6010B |
| Manganese | 30 | 222 | | 253 | | 13.1 | | 6010B |
| Potassium | 30 | 996 | | 1250 | | 22.6 | | 6010B |
| Silver | 20 | 0.805 | | 0.789 | | 2.0 | | 6020 |
| Sodium | 30 | 1510 | | 1910 | | 23.4 | | 6010B |
| Titanium | 30 | 282 | | 259 | | 8.5 | | 6010B |
| Vanadium | 30 | 20.8 | | 22.0 | | 5.6 | | 6010B |
| Zinc | 30 | 220 | | 229 | | 4.0 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Units:** | MG/KG |
| **Project Name:** | Passaic RI/FS Sediment | **Basis:** | DRY |
| **Matrix:** | SEDIMENT | **% Solids:** | 72.9 |

**Sample Name:** LPRC13AD **Lab Code:** K1008857-002D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Selenium | | 0.35 | | 0.31 | | 12.1 | | 7742 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Units:** | MG/KG |
| **Project Name:** | Passaic RI/FS Sediment | **Basis:** | DRY |
| **Matrix:** | SEDIMENT | **% Solids:** | 72.7 |

**Sample Name:** Batch QC1D **Lab Code:** K1008775-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Arsenic | | 1.29 | | 1.21 | | 6.4 | | 6020 |
| Beryllium | | 0.047 | | 0.044 | | 6.6 | | 6020 |
| Cadmium | | 0.031 | | 0.026 | | 17.5 | | 6020 |
| Chromium | 20 | 3.88 | | 3.50 | | 10.3 | | 6020 |
| Cobalt | 20 | 0.922 | | 0.871 | | 5.7 | | 6020 |
| Copper | 20 | 3.13 | | 2.75 | | 12.9 | | 6020 |
| Lead | 20 | 2.100 | | 1.950 | | 7.4 | | 6020 |
| Nickel | 20 | 1.64 | | 1.50 | | 8.9 | | 6020 |
| Thallium | | 0.065 | | 0.061 | | 6.3 | | 6020 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals



## LABORATORY CONTROL SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Aqueous LCS Source:** **Solid LCS Source:** ERA D065540

| Analyte | Aqueous: ug/L | | | Solid: mg/kg | | | | |
|---|---|---|---|---|---|---|---|---|
| | True | Found | %R | True | Found | C | Limits | %R |
| Aluminum | | | | 10500 | 8290 | 41 | 158 | 79.0 |
| Antimony | | | | 105 | 85.1 | 50 | 150 | 81.0 |
| Arsenic | | | | 88.3 | 85.4 | 78 | 122 | 96.7 |
| Barium | | | | 432 | 407 | 81 | 119 | 94.2 |
| Beryllium | | | | 58.2 | 54.5 | 83 | 117 | 93.6 |
| Cadmium | | | | 91 | 92.7 | 81 | 119 | 101.9 |
| Calcium | | | | 9630 | 8750 | 79 | 121 | 90.9 |
| Chromium | | | | 144 | 128 | 80 | 119 | 88.9 |
| Cobalt | | | | 190 | 181 | 82 | 118 | 95.3 |
| Copper | | | | 237 | 217 | 83 | 116 | 91.6 |
| Iron | | | | 18900 | 16200 | 50 | 149 | 85.7 |
| Lead | | | | 104 | 95.9 | 79 | 121 | 92.2 |
| Magnesium | | | | 4040 | 3730 | 73 | 127 | 92.3 |
| Manganese | | | | 497 | 443 | 81 | 119 | 89.1 |
| Nickel | | | | 200 | 191 | 81 | 118 | 95.5 |
| Potassium | | | | 4340 | 3900 | 73 | 126 | 89.9 |
| Selenium | | | | 192 | 178 | 80 | 120 | 92.7 |
| Silver | | | | 76.4 | 75.5 | 66 | 134 | 98.8 |
| Sodium | | | | 735 | 694 | 74 | 126 | 94.4 |
| Thallium | | | | 247 | 234 | 79 | 120 | 94.7 |
| Titanium | | | | 432 | 461 | 28 | 172 | 106.7 |
| Vanadium | | | | 180 | 164 | 79 | 121 | 91.1 |
| Zinc | | | | 292 | 261 | 73 | 121 | 89.4 |

# Metals

- 9 -

## ICP SERIAL DILUTIONS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1 **Units:** UG/L

**Project Name:** Passaic RI/FS Sediment

**Sample Name:** LPRC07CL **Lab Code:** K1008857-001L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Differ-ence | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 33980.0 | | 33650.0 | | 1.0 | | P |
| Antimony | 0.590 | | 0.545 | | 8 | | MS |
| Barium | 295.0 | | 306.0 | | 3.7 | | P |
| Calcium | 19590.0 | | 20360.0 | | 3.9 | | P |
| Iron | 76570.0 | | 80600.0 | | 5.3 | | P |
| Magnesium | 24830.0 | | 25185.0 | | 1.4 | | P |
| Manganese | 1033.00 | | 1078.50 | | 4.4 | | P |
| Potassium | 4641.0 | | 5355.0 | | 15.4 | E | P |
| Silver | 1.500 | | 1.702 | | 13 | | MS |
| Sodium | 7034.0 | | 7400.0 | | 5.2 | | P |
| Titanium | 1604.0 | | 1695.0 | | 5.7 | | P |
| Vanadium | 97.1 | | 103.0 | | 6.1 | | P |
| Zinc | 1023.00 | | 1084.50 | | 6.0 | | P |

# Metals

- 9 -

## ICP SERIAL DILUTIONS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1  Units: UG/L

Project Name: Passaic RI/FS Sediment

Sample Name: Batch QC1L  Lab Code: K1008775-001L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | | 3.0 | J | 30 | | MS |
| Beryllium | 0.083 | | 0.082 | J | 1 | | MS |
| Cadmium | 0.055 | | 0.059 | J | 7 | | MS |
| Chromium | 6.88 | | 7.63 | | 11 | E | MS |
| Cobalt | 1.636 | | 1.858 | | 14 | E | MS |
| Copper | 5.55 | | 6.27 | | 13 | | MS |
| Lead | 3.728 | | 4.225 | | 13 | E | MS |
| Nickel | 2.91 | | 3.30 | | 13 | | MS |
| Thallium | 0.116 | | 0.089 | J | 23 | | MS |

# Metals

- 10 -

## DETECTION LIMITS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP/ICP-MS ID #:

GFAA ID #: K-FLAA-02 AA ID #:

| Analyte | Wave-length (nm) | Back-ground | LOQ ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Selenium | 196.0 | | 0.5 | 0.1 | H |

Comments:

# Metals

- 10 -

## DETECTION LIMITS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

| Analyte | Wave-length (nm) | Back-ground | LOQ ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Aluminum | 394.4 | | 50.0 | 2.0 | P |
| Barium | 455.4 | | 10.0 | 0.30 | P |
| Calcium | 315.8 | | 50.0 | 10.0 | P |
| Iron | 259.9 | | 20.0 | 3.5 | P |
| Magnesium | 285.2 | | 20.0 | 1.5 | P |
| Manganese | 257.6 | | 10.00 | 0.10 | P |
| Potassium | 766.5 | | 400.0 | 100 | P |
| Sodium | 589.5 | | 200 | 20.0 | P |
| Titanium | 336.1 | | 10.0 | 0.3 | P |
| Vanadium | 292.4 | | 10.0 | 1.5 | P |
| Zinc | 206.2 | | 10.00 | 1.50 | P |

Comments:

# Metals

- 10 -

## DETECTION LIMITS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

| Analyte | Isotope | Back-ground | LOQ ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Antimony | 123 | | 0.100 | 0.018 | MS |
| Arsenic | 75 | | 1.0 | 0.1 | MS |
| Beryllium | 9 | | 0.040 | 0.006 | MS |
| Cadmium | 111 | | 0.040 | 0.008 | MS |
| Chromium | 52 | | 0.40 | 0.03 | MS |
| Cobalt | 59 | | 0.040 | 0.002 | MS |
| Copper | 65 | | 0.20 | 0.16 | MS |
| Lead | 208 | | 0.100 | 0.012 | MS |
| Nickel | 60 | | 0.40 | 0.04 | MS |
| Silver | 109 | | 0.040 | 0.016 | MS |
| Thallium | 205 | | 0.040 | 0.006 | MS |

Comments:

# Metals

## - 11A -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Al | Ca | Fe | Mg | Co |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000880 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000290 | 0.0000000 | -0.0001420 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0000220 | 0.0000000 | -0.0000580 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000100 | 0.0000000 | 0.0000000 |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0002330 | 0.0000000 | 0.0016240 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000590 | 0.0000000 | 0.0000150 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000230 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | -0.0000030 | 0.0000000 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000000 | 0.0001620 | 0.0000000 | 0.0006220 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0000940 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000130 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001940 |
| Phosphorus | 214.914 | -0.0005540 | 0.0000000 | 0.0006550 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | -0.0001120 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0014540 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000210 | 0.0000000 | 0.0000000 | 0.0000320 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | -0.0000020 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | 0.0001010 | 0.0000000 | 0.0000000 |

Comments:

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Cr | Mn | Mo | Ni | P |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0004350 | 0.0003100 | 0.0000000 |
| Antimony | 206.833 | 0.0173600 | -0.0001330 | 0.0011910 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0003470 | -0.0001550 | 0.0005480 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | -0.0000300 | -0.0001890 | -0.0000190 | 0.0000000 |
| Boron | 249.678 | 0.0004530 | 0.0000000 | -0.0008670 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000410 | 0.0000000 | -0.0000280 | -0.0000170 | 0.0000000 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0001390 | 0.0000680 | 0.0000000 | 0.0000280 |
| Cobalt | 230.786 | -0.0000120 | 0.0000380 | 0.0011280 | -0.0001970 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000240 | 0.0025520 | -0.0024670 | 0.0000000 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | -0.0002400 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | 0.0001340 | -0.0010800 | 0.0001780 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | -0.0014420 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | -0.0000110 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | -0.0000270 | 0.0000000 | -0.0000310 | 0.0000000 |
| Nickel | 231.604 | -0.0000240 | 0.0000000 | -0.0000480 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.914 | 0.0000000 | -0.0004110 | 0.0085820 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0006630 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0192220 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000390 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000080 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0002570 | 0.0008680 | 0.0000000 | 0.0000000 | 0.0000000 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000410 | 0.0001300 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | -0.0027450 | -0.0002030 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | -0.0001050 | 0.0057510 | 0.0000000 |

Comments:

*Columbia Analytical Services*

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Si | Ti | V | | |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0005300 | | |
| Antimony | 206.833 | -0.0000210 | 0.0004780 | 0.0000000 | | |
| Arsenic | 189.042 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000280 | | |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0001270 | | |
| Cadmium | 226.502 | -0.0000020 | 0.0000000 | 0.0000000 | | |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Chromium | 267.716 | 0.0000000 | 0.0000590 | -0.0000760 | | |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Copper | 224.7 | -0.0000060 | 0.0004820 | -0.0000300 | | |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Lead | 220.353 | 0.0002440 | 0.0000000 | 0.0000000 | | |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Phosphorus | 214.914 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silver | 328.068 | 0.0000000 | -0.0000780 | 0.0000910 | | |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Thallium | 190.856 | 0.0000000 | -0.0008960 | -0.0007350 | | |
| Tin | 189.989 | 0.0000000 | -0.0007490 | 0.0000000 | | |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Vanadium | 292.402 | 0.0000000 | 0.0009490 | 0.0000000 | | |
| Zinc | 213.856 | 0.0000000 | -0.0003230 | 0.0000000 | | |

Comments:

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Aluminum | 15.000 | 900000 | 6010B |
| Barium | 15.000 | 45000 | 6010B |
| Calcium | 15.000 | 900000 | 6010B |
| Iron | 15.000 | 360000 | 6010B |
| Magnesium | 15.000 | 540000 | 6010B |
| Manganese | 15.000 | 9000 | 6010B |
| Potassium | 15.000 | 900000 | 6010B |
| Sodium | 15.000 | 900000 | 6010B |
| Titanium | 15.000 | 22500 | 6010B |
| Vanadium | 15.000 | 45000 | 6010B |
| Zinc | 15.000 | 18000 | 6010B |

Comments:

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP ID Number: K-ICP-MS-02

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Antimony | 15.000 | 900 | 6020 |
| Arsenic | 15.000 | 900 | 6020 |
| Beryllium | 15.000 | 450 | 6020 |
| Cadmium | 15.000 | 900 | 6020 |
| Chromium | 15.000 | 900 | 6020 |
| Cobalt | 15.000 | 900 | 6020 |
| Copper | 15.000 | 900 | 6020 |
| Lead | 15.000 | 900 | 6020 |
| Nickel | 15.000 | 900 | 6020 |
| Silver | 15.000 | 270 | 6020 |
| Thallium | 15.000 | 450 | 6020 |

Comments:

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** F

| Sample ID | Preparation Date | Initial Weight (g) | Final Volume(mL) |
|---|---|---|---|
| K1008857-001 | 09/01/10 | 1.40 | 100.0 |
| K1008857-002 | 09/01/10 | 1.21 | 100.0 |
| K1008857-002D | 09/01/10 | 1.22 | 100.0 |
| K1008857-002S | 09/01/10 | 1.20 | 100.0 |
| K1008857-MB | 09/01/10 | 1.00 | 100.0 |
| LCSS | 09/01/10 | 1.00 | 100.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** P

| Sample ID | Preparation Date | Initial Weight (g) | Final Volume (mL) |
|---|---|---|---|
| K1008857-001 | 09/23/10 | 1.72 | 100.0 |
| K1008857-001D | 09/23/10 | 1.65 | 100.0 |
| K1008857-001S | 09/23/10 | 1.65 | 100.0 |
| K1008857-002 | 09/23/10 | 1.62 | 100.0 |
| K1008857-MB | 09/23/10 | 1.00 | 100.0 |
| LCSS | 09/23/10 | 1.01 | 100.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** MS

| Sample ID | Preparation Date | Initial Weight (g) | Final Volume (mL) |
|---|---|---|---|
| K1008775-001D | 09/01/10 | 1.20 | 100.0 |
| K1008775-001S | 09/01/10 | 1.21 | 100.0 |
| K1008857-001 | 09/01/10 | 1.42 | 100.0 |
| K1008857-002 | 09/01/10 | 1.21 | 100.0 |
| K1008857-MB | 09/01/10 | 1.00 | 100.0 |
| LCSS | 09/01/10 | 1.00 | 100.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** MS

| Sample ID | Preparation Date | Initial Weight (g) | Final Volume(mL) |
|---|---|---|---|
| K1008857-001 | 09/01/10 | 1.41 | 100.0 |
| K1008857-001 | 09/01/10 | 1.41 | 100.0 |
| K1008857-001D | 09/01/10 | 1.42 | 100.0 |
| K1008857-001D | 09/01/10 | 1.42 | 100.0 |
| K1008857-001S | 09/01/10 | 1.42 | 100.0 |
| K1008857-001S | 09/01/10 | 1.42 | 100.0 |
| K1008857-002 | 09/01/10 | 1.21 | 100.0 |
| K1008857-002 | 09/01/10 | 1.21 | 100.0 |
| K1008857-MB | 09/01/10 | 1.00 | 100.0 |
| K1008857-MB | 09/01/10 | 1.00 | 100.0 |
| LCSS | 09/01/10 | 1.01 | 100.0 |
| LCSS | 09/01/10 | 1.01 | 100.0 |

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/24/10 **End Date:** 09/24/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CAL BLK | 1 | 09:46 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 0.5 | 1 | 09:49 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 1.0 | 1 | 09:51 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 5.0 | 1 | 09:53 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 7.5 | 1 | 09:56 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 10.0 | 1 | 09:58 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ICV1 | 1 | 10:01 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ICB1 | 1 | 10:03 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CRA | 1 | 10:05 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCV1 | 1 | 10:08 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB1 | 1 | 10:10 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 10:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| LCSS | 1,000 | 10:15 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| K1008857-001 | 2 | 10:17 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 10:20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:29 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-002S | 10 | 10:32 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 10 | 10:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 10:36 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB2 | 1 | 10:39 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 10:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1,000 | 10:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:48 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 10:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:53 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 10 | 10:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 10 | 10:58 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 11:00 | | | | | | | | | | | | | | | | | | | | | | | | | |

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/24/10 **End Date:** 09/24/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 2 | 11:02 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 11:05 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB3 | 1 | 11:07 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 11:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 11:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 11:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 11:17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 11:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 12:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 12:53 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 12:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 12:58 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV4 | 1 | 13:03 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB4 | 1 | 13:05 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 13:07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:29 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV5 | 1 | 13:31 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB5 | 1 | 13:34 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 13:36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:45 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/24/10 **End Date:** 09/24/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 2 | 13:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 13:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV6 | 1 | 13:59 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB6 | 1 | 14:02 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:09 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV7 | 1 | 14:14 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB7 | 1 | 14:16 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| K1008857-MB | 2 | 14:19 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| K1008857-002D | 2 | 14:21 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-002 | 2 | 14:26 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:28 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:39 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV8 | 1 | 14:42 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB8 | 1 | 14:46 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 15:01 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 15:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 15:05 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/24/10 **End Date:** 09/24/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CCV9 | 1 | 15:08 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB9 | 1 | 15:17 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 15:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV10 | 1 | 15:28 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB10 | 1 | 15:30 | | | | | | | | | | | | | | | | | | | X | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P

**Start Date:** 09/07/10 **End Date:** 09/07/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| BLK | 1 | 13:54 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| STD A | 1 | 13:57 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| STD B | 1 | 14:00 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| ICV1 | 1 | 14:03 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 14:07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICB1 | 1 | 14:15 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| CCV1 | 1 | 14:18 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| CCV1 | 1 | 14:22 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 14:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB1 | 1 | 14:30 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| CRDL1 | 1 | 14:33 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 14:36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICSA | 1 | 14:43 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ICSAB | 1 | 14:47 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 14:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:02 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 15:10 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| CCV2 | 1 | 15:13 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCB2 | 1 | 15:17 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 15:20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:29 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:32 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:37 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P

**Start Date:** 09/07/10 **End Date:** 09/07/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 1 | 15:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 15:49 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| CCV3 | 1 | 15:52 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCB3 | 1 | 15:56 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 16:01 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV4 | 1 | 16:33 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| CCV4 | 1 | 16:36 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCB4 | 1 | 16:40 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 1 | 16:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 16:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 2 | 16:48 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| LCSS | 2 | 16:51 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| ZZZZZZ | 2 | 16:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-001 | 2 | 16:57 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| K1008857-001D | 2 | 17:01 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| K1008857-001L | 10 | 17:05 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| K1008857-001S | 2 | 17:08 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| K1008857-002 | 2 | 17:11 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |
| CCV5 | 1 | 17:15 | | | | | | | | | | | | | | | X | | | | | | | | X | X | |
| CCV5 | 1 | 17:18 | | X | | | X | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCB5 | 1 | 17:22 | | X | | | X | | | X | | | | X | | X | X | | | X | | | X | | X | X | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P
**Start Date:** 09/23/10 **End Date:** 09/23/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B | AU | LI | MO | OS | PD | P | PT | SI | S | SN | SR | TI | U | | | | | | | | | | |
| BLK | 1.00 | 18:18 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| STD A | 1.00 | 18:21 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| STD B | 1.00 | 18:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV1 | 1.00 | 18:27 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 18:30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 18:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICB1 | 1.00 | 18:37 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV1 | 1.00 | 18:40 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 18:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB1 | 1.00 | 18:49 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CRDL1 | 1.00 | 18:55 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 18:58 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICSA | 1.00 | 19:01 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ICSAB | 1.00 | 19:05 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 5.00 | 19:25 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1.00 | 19:28 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:31 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB2 | 1.00 | 19:35 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:37 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:48 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 19:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:05 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:09 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1.00 | 20:13 | | | | | | | | | | | | | | X | | | | | | | | | | | |

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P
**Start Date:** 09/23/10 **End Date:** 09/23/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B | AU | LI | MO | OS | PD | P | PT | SI | S | SN | SR | TI | U | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB3 | 1.00 | 20:21 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:31 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:39 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 20:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 2.00 | 20:53 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| LCSS | 2.00 | 20:55 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-001 | 2.00 | 20:59 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV4 | 1.00 | 21:03 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB4 | 1.00 | 21:10 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-001D | 2.00 | 21:12 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-001L | 10.00 | 21:16 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 2.00 | 21:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-001S | 2.00 | 21:23 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-002 | 2.00 | 21:27 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:32 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV5 | 1.00 | 21:46 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 21:49 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB5 | 1.00 | 21:53 | | | | | | | | | | | | | | X | | | | | | | | | | | |

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 09/07/10 **End Date:** 09/07/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal. Blk | 1 | 12:28 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| Cal. Stn | 1 | 12:31 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ICV1 | 1 | 12:35 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| CCV1 | 1 | 12:38 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ICB1 | 1 | 12:46 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| CCB1 | 1 | 12:48 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| CRA | 1 | 12:52 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ICS-A1 | 1 | 12:55 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ICS-AB1 | 1 | 12:59 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| K1008857-MB | 5 | 13:03 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| LCSS | 100 | 13:06 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ZZZZZZ | 5 | 13:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008775-001D | 5 | 13:13 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| K1008775-001L | 25 | 13:17 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| K1008775-001A | 5 | 13:20 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| K1008775-001S | 25 | 13:24 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ZZZZZZ | 1 | 13:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 13:31 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| CCB2 | 1 | 13:37 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ZZZZZZ | 1 | 13:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-001 | 5 | 13:49 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| K1008857-002 | 5 | 13:52 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| ZZZZZZ | 1 | 13:56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 14:20 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |
| CCB3 | 1 | 14:27 | | | | X | | X | X | | X | X | X | | X | | | | X | | | | | X | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 09/03/10 **End Date:** 09/03/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal. Blk | 1 | 11:56 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| Cal. Stn | 1 | 11:58 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ICV1 | 1 | 12:00 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCV1 | 1 | 12:03 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ICB1 | 1 | 12:10 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCB1 | 1 | 12:13 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CRA | 1 | 12:15 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ICS-A1 | 1 | 12:17 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ICS-AB1 | 1 | 12:20 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ZZZZZZ | 1 | 12:28 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:31 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 5 | 12:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:37 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 13:00 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCB2 | 1 | 13:05 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ZZZZZZ | 1 | 13:07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:09 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:21 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:25 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 13:29 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 09/03/10 **End Date:** 09/03/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CCB3 | 1 | 13:34 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ZZZZZZ | 1 | 13:36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 5 | 13:38 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-001 | 5 | 13:41 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-001D | 5 | 13:49 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-001L | 25 | 13:51 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-001A | 5 | 13:53 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-001S | 25 | 13:55 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| LCSS | 100 | 13:57 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCV4 | 1 | 14:00 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCB4 | 1 | 14:07 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| K1008857-002 | 5 | 14:09 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| ZZZZZZ | 1 | 14:11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV5 | 1 | 14:24 | | | X | | | | | | | | | | | | | | | | | X | | | | | |
| CCB5 | 1 | 14:28 | | | X | | | | | | | | | | | | | | | | | X | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Hyphite

**Prep Run**: 118544 **Prep Workflow**: MetDigSICP **Status**: Prepped **Prep Date**: 09/01/2010 01:00
**Team**: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
**Analyst**: WSchumann **Rush/NPDES**: N/A **Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Initial Basis | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009150-01 | Method Blank | | g | As Received | 100 mL | | | 10% HNO3 5% HCL |
| KQ1009150-02 | Lab Control Sample | | 1.00 g | As Received | 100 mL | | | 10% HNO3 5% HCL |
| K1008857-001 | LPRC07C | .02 | 1.40 g | As Received | 100 mL | | | 10% HNO3 5% HCL |
| K1008857-002 | LPRC13A | .02 | 1.21 g | As Received | 100 mL | | | 10% HNO3 5% HCL |
| K1008857-002: KQ1009150-03 | Duplicate | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 5% HCL |
| K1008857-002: KQ1009150-04 | Matrix Spike | .02 | 1.20 g | As Received | 100 mL | 0.5 mL | 16643 | 10% HNO3 5% HCL |

6 Total Samples consisting of 2 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| K-MET SOIL CRM | SRM | 14875 | 12/21/2011 | K-MET SS2 | Spike | 16643 | 10/1/2010 |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|
| Digestion | K-MET HCL | 18676 | Digestion | K-MET H2O2 | 18955 |
| Digestion | K-MET HNO3 | 18888 | Digestion | K-MET 100ml Centrifuge Tube | 19603 |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | | Step | Name | Property | Value | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-Balance-02 | Date Checked | 9/1/10 | | Digestion | K-BlockDigester-07 | Temperature | 96 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 01-SEP-10 01:00 | 01-SEP-10 16:45 | WSchumann | | N | |

## Comments

Initial Reflux: 45min HCL Reflux: 165min

## Review

Reviewed by: _____ Date: 9/2/10

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Hydride

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | 0.50 |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |

| | | | | | |
|---|---|---|---|---|---|
| **K-MET GFLCSW** | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| **K-MET QCP-CICV-1** | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| **K-MET QCP-CICV-2** | Sb | no dilution | - | 500 | |
| **K-MET QCP-CICV-3** | As, Pb, Se, Tl | no dilution | - | 500 | |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118543
**Team**: Metals
**Analyst**: WSchumann

**Prep Workflow**: MetDigSICP
**Prep Method**: EPA 3050B,EPA CLP-METALS ILM05.3
**Rush/NPDES**: Both

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 09/01/2010 12:40
**Due Date**: 08/16/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Initial Basis | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009149-01 | Method Blank | | g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| KQ1009149-02 | Lab Control Sample | | 1.01 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| KQ1009149-03 | Lab Control Sample | | g | As Received | 100 mL | 0.5 mL | 15786 | 10% HNO3 10% HCL |
| K1008775-001 | MBP1+2- Comp | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008775-001: KQ1009149-08 | Duplicate | .02 | 1.20 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008775-001: KQ1009149-06 | Matrix Spike | .02 | 1.22 g | As Received | 100 mL | 0.5 mL<br>0.5 mL<br>1 mL<br>1 mL<br>1 mL<br>2 mL | 15432<br>15835<br>18837<br>20873<br>20981<br>20982 | 10% HNO3 10% HCL |
| K1008775-002 | LA-5-Comp | .02 | 1.40 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008775-003 | BD-08 | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008846-001 | 165023 | .01 | 1.21 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008846-002 | 175574 | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008857-001 | LPRC07C | .02 | 1.41 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008857-001: KQ1009149-04 | Duplicate | .02 | 1.42 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1008857-001: KQ1009149-05 | Matrix Spike | .02 | 1.42 g | As Received | 100 mL | 0.5 mL<br>0.5 mL<br>0.5 mL<br>1 mL<br>1 mL<br>1 mL<br>2 mL | 15432<br>15786<br>15835<br>18837<br>20873<br>20981<br>20982 | 10% HNO3 10% HCL |
| K1008857-002 | LPRC13A | .02 | 1.21 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1009027-001 | Bed #3 | .02 | 1.02 g | As Received | 100 mL | | | 10% HNO3 10% HCL |
| K1009155-001 | CB6 Outfall-051400 | .01 | 1.01 g | As Received | 100 mL | | | 10% HNO3 10% HCL |

16 Total Samples consisting of 9 Client Samples, 4 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K-MET SOIL CRM | SRM | 14875 | 12/21/2011 | K-MET SS5 | Spike | 20981 | 2/25/2011 |
| K-MET SS1 | Spike | 20982 | 10/1/2010 | Phosphorus 1000 ug/mL as P | Spike | 15786 | 8/31/2011 |
| K-MET SS3 | Spike | 18837 | 12/1/2010 | Strontium 1000 ug/mL Sr | Spike | 15835 | 8/16/2011 |
| K-MET SS4 | Spike | 20873 | 12/16/2010 | Tin 1000 ug/mL Sn | Spike | 15432 | 12/1/2010 |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|
| Digestion | K-MET HCL | 18676 | Digestion | K-MET 100ml Centrifuge Tube | 19603 |
| Digestion | K-MET HNO3 | 18888 | | | |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | | Step | Name | Property | Value | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-Balance-02 | Date Checked | 9/1/10 | | Digestion | K-BlockDigester-07 | Temperature | 96 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 01-SEP-10 12:40 | 01-SEP-10 14:15 | WSchumann | | N | |

## Comments

Initial Reflux: 15min Secondary Reflux: 30min HCl Reflux: 15min tin free $H_2O_2$ Lot# C035205

## Review

Reviewed by: _____ Date: 9/2/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | 2.00 |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | 1.00 |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | 1.00 |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | 1.00 |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |
| K-MET GFLCSW | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| K-MET QCP-CICV-1 | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| K-MET QCP-CICV-2 | Sb | no dilution | - | 500 | |
| K-MET QCP-CICV-3 | As, Pb, Se, Tl | no dilution | - | 500 | |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| P | 0.5 | 1000 | METI-82-P | 5/31/11 |
| SV | 1 | 1 | METI-83-M | 5/16/11 |
| SN | 1 | 1 | METI-76-D | 12/10 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s) : K1008857 Ti only

Star Lims Run No.: 118543R

Method : CLP
3005A CLP Hot Block Other- _____

Analysis for : ICP ICP-MS GFAA
Flame AA Other _____

| Sample | Initial Weight (g) | Dry | Wet | Initial Volume(ml) | Final Volume (ml) | Matrix |
|---|---|---|---|---|---|---|
| Blank | | | X | | 100 | 10% $HNO_3$, 10% HCl |
| LCS | 1.01 | | | | | |
| 8857 - 1 | 1.72 | | | | | |
| - 1D | 1.65 | | | | | |
| - 1S | 1.61 | | | | | |
| - 2 | 1.62 | | | | | |
| 8857 - 1S, Ti | 1.65 | | | | | |

Time Digestion Started: 14:00 Balance I.D.: 2 Date Balance Checked 9/23/10 MC 9/10

Lot # Acids Used: HNO3 J100038 HCl 201017001 $H_2O_2$ 50095020 HF _____

Hot Block Temp: 95°C

LCSS (circle appropriate) ERA CLP Soil Lot # D045540 Other: _____

GFAA LCSW = GFLCSW, ID#18987, _____ mls. added

ICP LCSW = QCP-CICV-1, ID#13109, _____ mls. added
QCP CICV-2, ID#12778, _____ mls. added
QCP CICV-3, ID#14972, _____ mls. added
SS4, ID#20873, _____ mls. Added

TCLP Spike/LCSE
TSS1 MET1-85-F _____ mls. Added

SPIKE INFO

K-METSS1 ID#20982 2.0 mls added K-METSS2 ID#16643 _____ mls added K-METSS5 ID#20981 1.0 mls added

K-MET SS3 ID#21052 1.0 mls added 200.8 1000ppb Stock ID#17425 _____ mls added

K-MET SS4 ID#20873 1.0 mls added Ag 1000ppb Stock ID#11605 _____ mls added

Additional spikes: 0.5 mls. of ~~Ag~~ Ti, MET1-80-6

Comments: _____

Analyst [signature] Date 9/23/10

Reviewer [signature] Date 9/24/10

metdig.xls

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | 2.00 |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | 1.00 |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | 1.00 |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | 1.00 |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |
| K-MET GFLCSW | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| K-MET QCP-CICV-1 | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| K-MET QCP-CICV-2 | Sb | no dilution | - | 500 | |
| K-MET QCP-CICV-3 | As, Pb, Se, Tl | no dilution | - | 500 | |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| Ti | 0.5 | 1000 | MET1-80-G | 5/10 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118545 **Prep Workflow**: MetDigSMS **Status**: Prepped **Prep Date**: 09/01/2010 12:47
**Team**: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
**Analyst**: WSchumann **Rush/NPDES**: N/A **Due Date**: 09/03/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Initial Basis | Final Volume | Spike Amt | Spike ID | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009151-01 | Method Blank | | g | As Received | 100 mL | | | 10% HNO3 |
| KQ1009151-02 | Lab Control Sample | | 1.00 g | As Received | 100 mL | | | 10% HNO3 |
| K1008775-001 | MBP1+2- Comp | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 |
| K1008775-001: KQ1009151-03 | Duplicate | .02 | 1.20 g | As Received | 100 mL | | | 10% HNO3 |
| K1008775-001: KQ1009151-04 | Matrix Spike | .02 | 1.21 g | As Received | 100 mL | 0.5 mL<br>1 mL<br>1 mL<br>2 mL | 15571<br>18837<br>20873<br>20982 | 10% HNO3 |
| K1008775-002 | LA-5-Comp | .02 | 1.40 g | As Received | 100 mL | | | 10% HNO3 |
| K1008775-003 | BD-08 | .02 | 1.22 g | As Received | 100 mL | | | 10% HNO3 |
| K1008857-001 | LPRC07C | .02 | 1.42 g | As Received | 100 mL | | | 10% HNO3 |
| K1008857-002 | LPRC13A | .02 | 1.21 g | As Received | 100 mL | | | 10% HNO3 |
| K1009171-005 | 77001 | .04 | 1.01 g | As Received | 100 mL | | | 10% HNO3 |
| K1009171-006 | 77006 | .04 | 1.21 g | As Received | 100 mL | | | 10% HNO3 |
| K1009171-007 | 77008 | .04 | 1.02 g | As Received | 100 mL | | | 10% HNO3 |
| K1009171-008 | 77003 | .04 | 1.41 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-004 | MWS-14-6-8 | .01 | 1.01 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-004: KQ1009151-05 | Duplicate | .01 | 1.00 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-004: KQ1009151-06 | Matrix Spike | .01 | 1.01 g | As Received | 100 mL | 0.5 mL<br>1 mL<br>1 mL<br>2 mL | 15571<br>18837<br>20873<br>20982 | 10% HNO3 |
| K1009184-005 | MWS-14-8-10 | .01 | 1.01 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-013 | MWS-64-6-8 | .01 | 1.02 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-018 | MWS-15-6-8 | .01 | 1.02 g | As Received | 100 mL | | | 10% HNO3 |
| K1009184-019 | MWS-15-8-10 | .01 | 1.00 g | As Received | 100 mL | | | 10% HNO3 |

20 Total Samples consisting of 14 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K-MET SOIL CRM | SRM | 14875 | 12/21/2011 | K-MET SS4 | Spike | 20873 | 12/16/2010 |
| K-MET SS1 | Spike | 20982 | 10/1/2010 | Titanium 1000 ug/mL Ti | Spike | 15571 | 5/5/2011 |
| K-MET SS3 | Spike | 18837 | 12/1/2010 | | | | |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|
| Digestion | K-MET HNO3 | 18888 | Digestion | K-MET 100ml Centrifuge Tube | 19603 |
| Digestion | K-MET H2O2 | 18955 | | | |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | | Step | Name | Property | Value | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-Balance-02 | Date Checked | 9/1/10 | | Digestion | K-BlockDigester-01 | Temperature | 95 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 01-SEP-10 12:47 | 01-SEP-10 13:47 | WSchumann | | N | |

## Comments

Initial Reflux: 15min Secondary Reflux: 30min

## Review

Reviewed by: _____ Date: 9/2/10

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | 2.00 |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | 1.00 |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | 1.00 |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | 1.00 |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |

| | | | | | |
|---|---|---|---|---|---|
| **K-MET GFLCSW** | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| K-MET QCP-CICV-1 | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| K-MET QCP-CICV-2 | Sb | no dilution | - | 500 | |
| K-MET QCP-CICV-3 | As, Pb, Se, Tl | no dilution | - | 500 | |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| Tl | 0.5 | 1000 | MET1-80-G | 5/5/11 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Element Analyzed: Se Hydride Instrument: K-FLAA-02
Service Request #: K1008862, K1008857

Batch QC SR's #: K1008862, K1008857
Calibration Std.: AA1-13-F Expiration Date: 03/03/11
2nd Source Std.: AA1-13-B Expiration Date: 11/03/10
Starlims #: 218178
Run #: 092410-Se1

# Hydride Data Review Form

| | | Yes | No | NA |
|---|---|---|---|---|
| 1 | ICV within 10% of true Value | X | | |
| 2. | Calibration data included | X | | |
| 3. | CCV's in control | X | | |
| 4. | CCB's and/or ICB's below MRL | X | | |
| 5. | All reported Results within Cal. Range | X | | |
| 6. | All Calculations are Correct | X | | |

Comments

Primary Reviewed by: BJS Date: 9/25/10

Secondary Reviewed by: JPB Date: 9/26/10

**COLUMBIA ANALYTICAL SERVICES, INC.**
**FAA Run Log**

| **Method:** (Circle Method Used)<br>7742 7062<br>Other:_____<br>Element: As Se | **Service Request # :** |
|---|---|

| **SAMPLE NUMBER** | **Dilution Factor** | **Measured** (µg/L) | **Recoveries** (ICV, CCV, CRA, LCS, Matrix Spk.) | | **Comments**<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|
| ICV | - | 7.602 | 101% | | |
| ICB | - | 0.052 | | | |
| CRA | - | 0.422 | 84% | | |
| CCV | - | 7.538 | 101% | | |
| CCB | - | 0.055 | | | |
| ~~K1008857-MB~~ | ~~1/2~~ | ~~0.896~~ | | | Rerun |
| LCSSK1008857 | 1/2*1/5*1/100 | 1.784 | 93% | | |
| K1008857-001 | 1/2 | 0.629 | | Cx= | 0.721 |
| K1008857-001A | 1/2 | 4.993 | 87% | | |
| ~~K1008857-002~~ | ~~1/2~~ | ~~1.915~~ | | | Rerun |
| JS ~~K1008857-002A~~ | ~~1/2~~ | ~~6.195~~ | | | Rerun |
| 9/25/10 ~~K1008857-002D~~ | ~~1/2~~ | ~~1.690~~ | | | Rerun |
| ~~K1008857-002DA~~ | ~~1/2~~ | ~~6.257~~ | | | Rerun |
| K1008857-002S | 1/2*1/5 | 1.953 | 98% | Cx= | 2.085 |
| K1008857-002SA | 1/2*1/5 | 6.636 | 94% | | |
| CCV | - | 7.579 | 101% | | |
| CCB | - | 0.039 | | | |
| K1008862-MB | 1/2 | -0.173 | | | |
| LCSSK1008862 | 1/2*1/5*1/100 | 1.924 | 100% | | |
| ~~K1008862-001~~ | ~~1/2~~ | ~~0.690~~ | | | Rerun |
| JS ~~K1008862-001A~~ | ~~1/2~~ | ~~5.532~~ | | | Rerun |
| 9/25/10 K1008862-001D | 1/2 | 1.875 | | Cx= | 3.354 |
| K1008862-001DA | 1/2 | 4.670 | 56% | | |
| K1008862-001S | 1/2*1/5 | 1.672 | 61% | Cx= | 1.911 |
| K1008862-001SA | 1/2*1/5 | 6.046 | 87% | | |
| K1008862-002 | 1/2 | 2.510 | | Cx= | 2.940 |
| K1008862-002A | 1/2 | 6.779 | 85% | | |
| CCV | - | 7.614 | 102% | | |
| CCB | - | 0.035 | | | |
| ~~K1008862-003~~ | ~~1/2~~ | ~~1.795~~ | | | Rerun |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| [signature] | 9/25/10 | 1 |

R:\ICP\MISC\FLAA\092410-Se1 LOG

**COLUMBIA ANALYTICAL SERVICES, INC.**
**FAA Run Log**

| **Method:** (Circle Method Used)<br>7742 7062<br>Other:_____<br>Element: As Se | **Service Request # :** |
|---|---|

| | SAMPLE NUMBER | Dilution Factor | Measured (µg/L) | Recoveries (ICV, CCV, CRA, LCS, Matrix Spk.) | | Comments<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|---|
| | ~~K1008862-003A~~ | ~~1/2~~ | ~~4.752~~ | | | Rerun |
| JJS | K1008862-004 | 1/2 | 4.890 | | Cx= | 8.623 |
| 9/25/10 | K1008862-004A | 1/2 | 7.726 | 57% | | |
| | K1008862-005 | 1/2 | 1.880 | | Cx= | 2.292 |
| | K1008862-005A | 1/2 | 5.982 | 82% | | |
| | K1008862-006 | 1/2 | 1.864 | | Cx= | 2.974 |
| | K1008862-006A | 1/2 | 4.998 | 63% | | |
| | K1008862-007 | 1/2 | 2.146 | | Cx= | 3.153 |
| | K1008862-007A | 1/2 | 5.550 | 68% | | |
| | CCV | - | 7.117 | 95% | | |
| | CCB | - | 0.072 | | | |
| | K1008862-008 | 1/2 | 2.214 | | Cx= | 3.428 |
| | K1008862-008A | 1/2 | 5.442 | 65% | | |
| | K1008862-009 | 1/2 | 2.261 | | Cx= | 3.423 |
| | K1008862-009A | 1/2 | 5.563 | 66% | | |
| | K1008862-010 | 1/2 | 2.159 | | Cx= | 2.833 |
| | K1008862-010A | 1/2 | 5.970 | 76% | | |
| | ~~K1008862-011~~ | ~~1/2~~ | ~~3.130~~ | | | Rerun |
| JS | ~~K1008862-011A~~ | ~~1/2~~ | ~~4.996~~ | | | Rerun |
| 12510 | K1008862-012 | 1/2 | 2.180 | | Cx= | 4.628 |
| | K1008862-012A | 1/2 | 4.535 | 47% | | |
| | CCV | - | 7.395 | 99% | | |
| | CCB | - | 0.127 | | | |
| | K1008862-013 | 1/2 | 3.202 | | Cx= | 3.955 |
| | K1008862-013A | 1/2 | 7.249 | 81% | | |
| | K1008862-014 | 1/2 | 2.752 | | Cx= | 3.361 |
| | K1008862-014A | 1/2 | 6.845 | 82% | | |
| | K1008862-015 | 1/2 | 2.456 | | Cx= | 3.919 |
| | K1008862-015A | 1/2 | 5.588 | 63% | | |
| | K1008862-016 | 1/2 | 0.198 | | Cx= | 0.279 |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| Brian Shell | 9/25/10 | 2 |

R:\ICP\MISC\FLAA\092410-Se1 LOG

**COLUMBIA ANALYTICAL SERVICES, INC.**
**FAA Run Log**

| **Method:** (Circle Method Used)<br>7742 7062<br>Other:_____<br>Element: As Se | **Service Request # :** |
|---|---|

| SAMPLE NUMBER | Dilution Factor | Measured (µg/L) | Recoveries (ICV, CCV, CRA, LCS, Matrix Spk.) | | Comments<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|
| K1008862-016A | 1/2 | 3.742 | 71% | | |
| ~~K1008862-017~~ | ~~1/2~~ | ~~1.959~~ | | | Rerun |
| ~~K1008862-017A~~ | ~~1/2~~ | ~~5.402~~ | | | Rerun |
| CCV | - | 7.404 | 99% | | |
| CCB | - | 0.053 | | | |
| K1008862-018 | 1/2 | 1.492 | | Cx= | 2.419 |
| K1008862-018A | 1/2 | 4.577 | 62% | | |
| JS ~~K1008862-019~~ | ~~1/2~~ | ~~1.757~~ | | | Rerun |
| 9/25/10 ~~K1008862-019A~~ | ~~1/2~~ | ~~5.243~~ | | | Rerun |
| CCV | - | 7.425 | 99% | | |
| CCB | - | 0.046 | | | |
| K1008857-MB | 1/2 | -0.120 | | | |
| K1008857-002D | 1/2 | 1.108 | | Cx= | 1.356 |
| K1008857-002DA | 1/2 | 5.194 | 82% | | |
| K1008857-002 | 1/2 | 1.389 | | Cx= | 1.557 |
| K1008857-002A | 1/2 | 5.849 | 89% | | |
| ~~K1008862-001D~~ | ~~1/2~~ | ~~2.333~~ | | | Not Needed |
| JS ~~K1008862-001~~ | ~~1/2~~ | ~~2.109~~ | | | Rerun |
| K1008862-001 | 1/2 | 1.802 | | Cx= | 3.486 |
| 9/25/10 K1008862-001A | 1/2 | 4.385 | 52% | | |
| CCV | - | 7.227 | 96% | | |
| CCB | - | 0.085 | | | |
| K1008862-003 | 1/2 | 1.073 | | Cx= | 1.917 |
| K1008862-003A | 1/2 | 3.872 | 56% | | |
| K1008862-011 | 1/2 | 1.384 | | Cx= | 2.601 |
| K1008862-011A | 1/2 | 4.044 | 53% | | |
| K1008862-017 | 1/2 | 1.555 | | Cx= | 2.753 |
| K1008862-017A | 1/2 | 4.379 | 56% | | |
| K1008862-019 | 1/2 | 1.492 | | Cx= | 2.527 |
| K1008862-019A | 1/2 | 4.444 | 59% | | |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| [illegible] | 9/25/10 | 3 |

R:\ICP\MISC\FLAA\092410-Se1 LOG

**COLUMBIA ANALYTICAL SERVICES, INC.**
**FAA Run Log**

| **Method:** (Circle Method Used)<br>7742 7062<br>Other:_____<br>Element: As Se | **Service Request # :** |
|---|---|

| SAMPLE NUMBER | Dilution Factor | Measured (µg/L) | Recoveries (ICV, CCV, CRA, LCS, Matrix Spk.) | | Comments<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|
| CCV | - | 7.143 | 95% | | |
| CCB | - | 0.080 | | | |
| K1008862-020 | 1/2 | 0.762 | | Cx= | 1.074 |
| K1008862-020A1 | 1/2 | 1.893 | | | |
| K1008862-020A2 | 1/2 | 3.147 | | | |
| K1008862-020A3 | 1/2 | 4.579 | | | |
| CCV | - | 7.169 | 96% | | |
| CCB | - | 0.088 | | | |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| [illegible] | 9/25/10 | 4 |

R:\ICP\MISC\FLAA\092410-Se1 LOG

MSA Calculations:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Additions: | 0 | 2 | 4 | 6 | r = | 0.99859 |
| K1008862-020 | Abs.: | 0.762 | 1.893 | 3.147 | 4.579083 | x= | 1.073837 |

==========

**Analysis Begun**

**Logged In Analyst: ACQMET10** **Technique: AA FIAS-Flame**
**Spectrometer Model: AAnalyst 200, S/N 200S5061701** **Autosampler Model: AS-90**

**Sample Information File: C:\data-AA\ACQMET10\Sample Information\092410-Se1.sif**
**Batch ID: 092410-Se1**
**Results Data Set: 092410-Se1**
**Results Library: R:\ICP\WIP\DATA\K-FLAA-02\Results Se.mdb**

==========

**Sequence No.: 1** **Autosampler Location: 1**
**Sample ID: Cal Blk** **Date Collected: 9/24/2010 9:46:50 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Cal Blk**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [0.00] | 0.006 | 0.021 | 0.006 | | | 09:47:06 | Yes |
| 2 | | [0.00] | 0.006 | 0.019 | 0.006 | | | 09:47:44 | Yes |
| 3 | | [0.00] | 0.005 | 0.020 | 0.005 | | | 09:48:20 | Yes |
| Mean: | | [0.00] | 0.006 | | | | | | |
| SD: | | 0.00 | 0.0005 | | | | | | |
| %RSD: | | 0.00 | 7.89 | | | | | | |

Auto-zero performed.

==========

**Sequence No.: 2** **Autosampler Location: 2**
**Sample ID: Std 0.5** **Date Collected: 9/24/2010 9:49:12 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 0.5**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [0.5] | 0.011 | 0.064 | 0.016 | | | 09:49:28 | Yes |
| 2 | | [0.5] | 0.010 | 0.069 | 0.016 | | | 09:50:04 | Yes |
| 3 | | [0.5] | 0.010 | 0.057 | 0.016 | | | 09:50:39 | Yes |
| Mean: | | [0.5] | 0.010 | | | | | | |
| SD: | | 0.0 | 0.0004 | | | | | | |
| %RSD: | | 0.0 | 3.76 | | | | | | |

Standard number 1 applied. [0.5]
Correlation Coef.: 1.000000 Slope: 0.02063 Intercept: 0.00000

==========

**Sequence No.: 3** **Autosampler Location: 3**
**Sample ID: Std 1.0** **Date Collected: 9/24/2010 9:51:32 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 1.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [1.0] | 0.022 | 0.106 | 0.028 | | | 09:51:49 | Yes |
| 2 | | [1.0] | 0.023 | 0.105 | 0.029 | | | 09:52:25 | Yes |
| 3 | | [1.0] | 0.023 | 0.120 | 0.029 | | | 09:53:00 | Yes |
| Mean: | | [1.0] | 0.023 | | | | | | |
| SD: | | 0.0 | 0.0003 | | | | | | |
| %RSD: | | 0.0 | 1.52 | | | | | | |

Standard number 2 applied. [1.0]
Correlation Coef.: 0.992381 Slope: 0.02241 Intercept: 0.00000

==========

**Sequence No.: 4** **Autosampler Location: 4**

**Sample ID: Std 5.0** **Date Collected: 9/24/2010 9:53:54 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 5.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [5.0] | 0.122 | 0.484 | 0.128 | | | 09:54:17 | Yes |
| 2 | | [5.0] | 0.122 | 0.481 | 0.127 | | | 09:54:53 | Yes |
| 3 | | [5.0] | 0.123 | 0.480 | 0.129 | | | 09:55:29 | Yes |
| Mean: | | [5.0] | 0.122 | | | | | | |
| SD: | | 0.0 | 0.0006 | | | | | | |
| %RSD: | | 0.0 | 0.53 | | | | | | |

Standard number 3 applied. [5.0]
Correlation Coef.: 0.999582 Slope: 0.02435 Intercept: 0.00000

---

**Sequence No.: 5** **Autosampler Location: 5**
**Sample ID: Std 7.5** **Date Collected: 9/24/2010 9:56:23 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 7.5**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [7.5] | 0.176 | 0.700 | 0.182 | | | 09:56:41 | Yes |
| 2 | | [7.5] | 0.177 | 0.704 | 0.182 | | | 09:57:16 | Yes |
| 3 | | [7.5] | 0.180 | 0.706 | 0.186 | | | 09:57:52 | Yes |
| Mean: | | [7.5] | 0.178 | | | | | | |
| SD: | | 0.0 | 0.0023 | | | | | | |
| %RSD: | | 0.0 | 1.31 | | | | | | |

Standard number 4 applied. [7.5]
Correlation Coef.: 0.999653 Slope: 0.02391 Intercept: 0.00000

---

**Sequence No.: 6** **Autosampler Location: 6**
**Sample ID: Std 10.0** **Date Collected: 9/24/2010 9:58:47 AM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 10.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [10.0] | 0.235 | 0.930 | 0.241 | | | 09:59:05 | Yes |
| 2 | | [10.0] | 0.237 | 0.936 | 0.243 | | | 09:59:41 | Yes |
| 3 | | [10.0] | 0.237 | 0.924 | 0.243 | | | 10:00:17 | Yes |
| Mean: | | [10.0] | 0.236 | | | | | | |
| SD: | | 0.0 | 0.0012 | | | | | | |
| %RSD: | | 0.0 | 0.53 | | | | | | |

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999781 Slope: 0.02376 Intercept: 0.00000
The calibration curve may not be linear.

---

**Calibration data for Se 196.03** **Equation: Linear Through Zero**

| ID | Mean Signal (Abs) | Entered Conc. ug/L | Calculated Conc. ug/L | Standard Deviation | %RSD |
|---|---|---|---|---|---|
| Cal Blk | 0.0000 | 0 | 0.000 | 0.00 | 7.9 |
| Std 0.5 | 0.0103 | 0.5 | 0.434 | 0.00 | 3.8 |
| Std 1.0 | 0.0228 | 1.0 | 0.960 | 0.00 | 1.5 |
| Std 5.0 | 0.1222 | 5.0 | 5.143 | 0.00 | 0.5 |
| Std 7.5 | 0.1778 | 7.5 | 7.482 | 0.00 | 1.3 |
| Std 10.0 | 0.2363 | 10.0 | 9.946 | 0.00 | 0.5 |

Correlation Coef.: 0.999781 Slope: 0.02376 Intercept: 0.00000

**Sequence No.: 7**
**Sample ID: ICV**
**Analyst:**

**Autosampler Location: 7**
**Date Collected: 9/24/2010 10:01:12 AM**
**Data Type: Original**

**Replicate Data: ICV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.599 | 7.599 | 0.181 | 0.720 | 0.186 | | | 10:01:31 | Yes |
| 2 | 7.618 | 7.618 | 0.181 | 0.714 | 0.187 | | | 10:02:07 | Yes |
| 3 | 7.591 | 7.591 | 0.180 | 0.720 | 0.186 | | | 10:02:42 | Yes |
| Mean: | 7.602 | 7.602 | 0.181 | | | | | | |
| SD: | 0.014 | 0.014 | 0.0003 | | | | | | |
| %RSD: | 0.184 | 0.184 | 0.18 | | | | | | |

QC value within limits for Se 196.03 Recovery = 101.37%
All analyte(s) passed QC.

**Sequence No.: 8**
**Sample ID: ICB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 10:03:37 AM**
**Data Type: Original**

**Replicate Data: ICB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.072 | 0.072 | 0.002 | 0.032 | 0.008 | | | 10:03:54 | Yes |
| 2 | 0.051 | 0.051 | 0.001 | 0.030 | 0.007 | | | 10:04:29 | Yes |
| 3 | 0.033 | 0.033 | 0.001 | 0.029 | 0.007 | | | 10:05:05 | Yes |
| Mean: | 0.052 | 0.052 | 0.001 | | | | | | |
| SD: | 0.020 | 0.020 | 0.0005 | | | | | | |
| %RSD: | 38.07 | 38.07 | 38.07 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

**Sequence No.: 9**
**Sample ID: CRA**
**Analyst:**

**Autosampler Location: 2**
**Date Collected: 9/24/2010 10:05:58 AM**
**Data Type: Original**

**Replicate Data: CRA**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.428 | 0.428 | 0.010 | 0.068 | 0.016 | | | 10:06:14 | Yes |
| 2 | 0.425 | 0.425 | 0.010 | 0.063 | 0.016 | | | 10:06:49 | Yes |
| 3 | 0.412 | 0.412 | 0.010 | 0.053 | 0.016 | | | 10:07:25 | Yes |
| Mean: | 0.422 | 0.422 | 0.010 | | | | | | |
| SD: | 0.009 | 0.009 | 0.0002 | | | | | | |
| %RSD: | 2.034 | 2.034 | 2.03 | | | | | | |

QC value within limits for Se 196.03 Recovery = 84.31%
All analyte(s) passed QC.

**Sequence No.: 10**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/24/2010 10:08:18 AM**
**Data Type: Original**

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.441 | 7.441 | 0.177 | 0.699 | 0.183 | | | 10:08:36 | Yes |
| 2 | 7.620 | 7.620 | 0.181 | 0.703 | 0.187 | | | 10:09:12 | Yes |
| 3 | 7.554 | 7.554 | 0.179 | 0.712 | 0.185 | | | 10:09:48 | Yes |
| Mean: | 7.538 | 7.538 | 0.179 | | | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.091 | 0.091 | 0.0022 |
| %RSD: | 1.204 | 1.204 | 1.20 |

QC value within limits for Se 196.03 Recovery = 100.51%
All analyte(s) passed QC.

---

**Sequence No.: 11**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 10:10:42 AM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.066 | 0.066 | 0.002 | 0.029 | 0.007 | | | 10:10:59 | Yes |
| 2 | 0.027 | 0.027 | 0.001 | 0.029 | 0.006 | | | 10:11:35 | Yes |
| 3 | 0.073 | 0.073 | 0.002 | 0.043 | 0.008 | | | 10:12:10 | Yes |
| Mean: | 0.055 | 0.055 | 0.001 | | | | | | |
| SD: | 0.025 | 0.025 | 0.0006 | | | | | | |
| %RSD: | 45.15 | 45.15 | 45.15 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 12**
**Sample ID: K1008857-MB**
**Analyst:**

**Autosampler Location: 9**
**Date Collected: 9/24/2010 10:13:02 AM**
**Data Type: Original**

BJS 9/25/10

---

**Replicate Data: K1008857-MB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.146 | -0.146 | -0.003 | 0.006 | 0.002 | | | 10:13:18 | Yes |
| 2 | 3.124 | 3.124 | 0.074 | 0.254 | 0.080 | | | 10:13:54 | Yes |
| 3 | -0.289 | -0.289 | -0.007 | -0.176 | -0.001 | | | 10:14:29 | Yes |
| Mean: | 0.896 | 0.896 | 0.021 | | | | | | |
| SD: | 1.930 | 1.930 | 0.0459 | | | | | | |
| %RSD: | 215.4 | 215.4 | 215.43 | | | | | | |

---

**Sequence No.: 13**
**Sample ID: LCSSK1008857**
**Analyst:**

**Autosampler Location: 10**
**Date Collected: 9/24/2010 10:15:22 AM**
**Data Type: Original**

---

**Replicate Data: LCSSK1008857**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.715 | 1.715 | 0.041 | 0.132 | 0.047 | | | 10:15:38 | Yes |
| 2 | 1.832 | 1.832 | 0.044 | 0.184 | 0.049 | | | 10:16:14 | Yes |
| 3 | 1.803 | 1.803 | 0.043 | 0.152 | 0.049 | | | 10:16:50 | Yes |
| Mean: | 1.784 | 1.784 | 0.042 | | | | | | |
| SD: | 0.061 | 0.061 | 0.0015 | | | | | | |
| %RSD: | 3.424 | 3.424 | 3.42 | | | | | | |

---

**Sequence No.: 14**
**Sample ID: K1008857-001**
**Analyst:**

**Autosampler Location: 11**
**Date Collected: 9/24/2010 10:17:43 AM**
**Data Type: Original**

---

**Replicate Data: K1008857-001**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.662 | 0.662 | 0.016 | 0.076 | 0.022 | | | 10:17:59 | Yes |
| 2 | 0.649 | 0.649 | 0.015 | 0.080 | 0.021 | | | 10:18:35 | Yes |
| 3 | 0.576 | 0.576 | 0.014 | 0.072 | 0.020 | | | 10:19:11 | Yes |

| | | | |
|---|---|---|---|
| Mean: | 0.629 | 0.629 | 0.015 |
| SD: | 0.046 | 0.046 | 0.0011 |
| %RSD: | 7.353 | 7.353 | 7.35 |

==========

**Sequence No.: 15**
**Sample ID: K1008857-001A**
**Analyst:**

**Autosampler Location: 12**
**Date Collected: 9/24/2010 10:20:04 AM**
**Data Type: Original**

---

**Replicate Data: K1008857-001A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.967 | 4.967 | 0.118 | 0.476 | 0.124 | | | 10:20:21 | Yes |
| 2 | 5.034 | 5.034 | 0.120 | 0.476 | 0.125 | | | 10:20:57 | Yes |
| 3 | 4.978 | 4.978 | 0.118 | 0.462 | 0.124 | | | 10:21:33 | Yes |
| Mean: | 4.993 | 4.993 | 0.119 | | | | | | |
| SD: | 0.036 | 0.036 | 0.0009 | | | | | | |
| %RSD: | 0.725 | 0.725 | 0.72 | | | | | | |

==========

**Sequence No.: 16**
**Sample ID: K1008857-002**
**Analyst:**

**Autosampler Location: 13**
**Date Collected: 9/24/2010 10:22:27 AM**
**Data Type: Original**

BSS 9/25/10

---

**Replicate Data: K1008857-002**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.976 | 1.976 | 0.047 | 0.197 | 0.053 | | | 10:22:45 | Yes |
| 2 | 1.917 | 1.917 | 0.046 | 0.194 | 0.051 | | | 10:23:21 | Yes |
| 3 | 1.852 | 1.852 | 0.044 | 0.186 | 0.050 | | | 10:23:56 | Yes |
| Mean: | 1.915 | 1.915 | 0.045 | | | | | | |
| SD: | 0.062 | 0.062 | 0.0015 | | | | | | |
| %RSD: | 3.238 | 3.238 | 3.24 | | | | | | |

==========

**Sequence No.: 17**
**Sample ID: K1008857-002A**
**Analyst:**

**Autosampler Location: 14**
**Date Collected: 9/24/2010 10:24:51 AM**
**Data Type: Original**

---

**Replicate Data: K1008857-002A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.246 | 6.246 | 0.148 | 0.584 | 0.154 | | | 10:25:10 | Yes |
| 2 | 6.178 | 6.178 | 0.147 | 0.594 | 0.153 | | | 10:25:46 | Yes |
| 3 | 6.162 | 6.162 | 0.146 | 0.575 | 0.152 | | | 10:26:21 | Yes |
| Mean: | 6.195 | 6.195 | 0.147 | | | | | | |
| SD: | 0.045 | 0.045 | 0.0011 | | | | | | |
| %RSD: | 0.725 | 0.725 | 0.73 | | | | | | |

==========

**Sequence No.: 18**
**Sample ID: K1008857-002D**
**Analyst:**

**Autosampler Location: 15**
**Date Collected: 9/24/2010 10:27:16 AM**
**Data Type: Original**

---

**Replicate Data: K1008857-002D**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.521 | 1.521 | 0.036 | 0.168 | 0.042 | | | 10:27:35 | Yes |
| 2 | 1.456 | 1.456 | 0.035 | 0.222 | 0.040 | | | 10:28:11 | Yes |
| 3 | 2.094 | 2.094 | 0.050 | 0.194 | 0.056 | | | 10:28:47 | Yes |
| Mean: | 1.690 | 1.690 | 0.040 | | | | | | |
| SD: | 0.351 | 0.351 | 0.0083 | | | | | | |
| %RSD: | 20.77 | 20.77 | 20.77 | | | | | | |

BJS 9/25/10

Sequence No.: 19
Sample ID: K1008857-002DA
Analyst:

Autosampler Location: 16
Date Collected: 9/24/2010 10:29:42 AM
Data Type: Original

Replicate Data: K1008857-002DA

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.314 | 6.314 | 0.150 | 0.605 | 0.156 | | | 10:30:01 | Yes |
| 2 | 6.268 | 6.268 | 0.149 | 0.600 | 0.155 | | | 10:30:37 | Yes |
| 3 | 6.190 | 6.190 | 0.147 | 0.578 | 0.153 | | | 10:31:12 | Yes |
| Mean: | 6.257 | 6.257 | 0.149 | | | | | | |
| SD: | 0.063 | 0.063 | 0.0015 | | | | | | |
| %RSD: | 1.006 | 1.006 | 1.01 | | | | | | |

Sequence No.: 20
Sample ID: K1008857-002S
Analyst:

Autosampler Location: 17
Date Collected: 9/24/2010 10:32:09 AM
Data Type: Original

Replicate Data: K1008857-002S

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.976 | 1.976 | 0.047 | 0.204 | 0.053 | | | 10:32:24 | Yes |
| 2 | 1.913 | 1.913 | 0.045 | 0.191 | 0.051 | | | 10:33:00 | Yes |
| 3 | 1.972 | 1.972 | 0.047 | 0.210 | 0.053 | | | 10:33:36 | Yes |
| Mean: | 1.953 | 1.953 | 0.046 | | | | | | |
| SD: | 0.035 | 0.035 | 0.0008 | | | | | | |
| %RSD: | 1.804 | 1.804 | 1.80 | | | | | | |

Sequence No.: 21
Sample ID: K1008857-002SA
Analyst:

Autosampler Location: 18
Date Collected: 9/24/2010 10:34:28 AM
Data Type: Original

Replicate Data: K1008857-002SA

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.625 | 6.625 | 0.157 | 0.633 | 0.163 | | | 10:34:44 | Yes |
| 2 | 6.598 | 6.598 | 0.157 | 0.633 | 0.163 | | | 10:35:20 | Yes |
| 3 | 6.686 | 6.686 | 0.159 | 0.626 | 0.165 | | | 10:35:56 | Yes |
| Mean: | 6.636 | 6.636 | 0.158 | | | | | | |
| SD: | 0.045 | 0.045 | 0.0011 | | | | | | |
| %RSD: | 0.673 | 0.673 | 0.67 | | | | | | |

Sequence No.: 22
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 9/24/2010 10:36:49 AM
Data Type: Original

Replicate Data: CCV

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.580 | 7.580 | 0.180 | 0.716 | 0.186 | | | 10:37:06 | Yes |
| 2 | 7.525 | 7.525 | 0.179 | 0.708 | 0.185 | | | 10:37:42 | Yes |
| 3 | 7.633 | 7.633 | 0.181 | 0.710 | 0.187 | | | 10:38:18 | Yes |
| Mean: | 7.579 | 7.579 | 0.180 | | | | | | |
| SD: | 0.054 | 0.054 | 0.0013 | | | | | | |
| %RSD: | 0.712 | 0.712 | 0.71 | | | | | | |

QC value within limits for Se 196.03 Recovery = 101.06%
All analyte(s) passed QC.

Sequence No.: 23
Sample ID: CCB
Analyst:

Autosampler Location: 1
Date Collected: 9/24/2010 10:39:12 AM
Data Type: Original

Replicate Data: CCB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.069 | 0.069 | 0.002 | 0.025 | 0.007 | | | 10:39:28 | Yes |
| 2 | 0.043 | 0.043 | 0.001 | 0.033 | 0.007 | | | 10:40:04 | Yes |
| 3 | 0.006 | 0.006 | 0.000 | 0.028 | 0.006 | | | 10:40:40 | Yes |
| Mean: | 0.039 | 0.039 | 0.001 | | | | | | |
| SD: | 0.031 | 0.031 | 0.0007 | | | | | | |
| %RSD: | 80.24 | 80.24 | 80.24 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24
Sample ID: K1008862-MB
Analyst:

Autosampler Location: 19
Date Collected: 9/24/2010 10:41:32 AM
Data Type: Original

Replicate Data: K1008862-MB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.170 | -0.170 | -0.004 | 0.010 | 0.002 | | | 10:41:48 | Yes |
| 2 | -0.164 | -0.164 | -0.004 | 0.010 | 0.002 | | | 10:42:23 | Yes |
| 3 | -0.185 | -0.185 | -0.004 | 0.007 | 0.001 | | | 10:42:59 | Yes |
| Mean: | -0.173 | -0.173 | -0.004 | | | | | | |
| SD: | 0.011 | 0.011 | 0.0003 | | | | | | |
| %RSD: | 6.196 | 6.196 | 6.20 | | | | | | |

Sequence No.: 25
Sample ID: LCSSK1008862
Analyst:

Autosampler Location: 20
Date Collected: 9/24/2010 10:43:52 AM
Data Type: Original

Replicate Data: LCSSK1008862

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.879 | 1.879 | 0.045 | 0.189 | 0.050 | | | 10:44:08 | Yes |
| 2 | 1.919 | 1.919 | 0.046 | 0.189 | 0.051 | | | 10:44:44 | Yes |
| 3 | 1.973 | 1.973 | 0.047 | 0.202 | 0.053 | | | 10:45:20 | Yes |
| Mean: | 1.924 | 1.924 | 0.046 | | | | | | |
| SD: | 0.048 | 0.048 | 0.0011 | | | | | | |
| %RSD: | 2.475 | 2.475 | 2.47 | | | | | | |

Sequence No.: 26
Sample ID: K1008862-001
Analyst:

Autosampler Location: 21
Date Collected: 9/24/2010 10:46:12 AM
Data Type: Original

RJS 9/25/10

Replicate Data: K1008862-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.663 | 0.663 | 0.016 | 0.077 | 0.022 | | | 10:46:29 | Yes |
| 2 | 0.675 | 0.675 | 0.016 | 0.078 | 0.022 | | | 10:47:05 | Yes |
| 3 | 0.734 | 0.734 | 0.017 | 0.082 | 0.023 | | | 10:47:40 | Yes |
| Mean: | 0.690 | 0.690 | 0.016 | | | | | | |
| SD: | 0.038 | 0.038 | 0.0009 | | | | | | |
| %RSD: | 5.500 | 5.500 | 5.50 | | | | | | |

Sequence No.: 27
Sample ID: K1008862-001A
Analyst:

Autosampler Location: 22
Date Collected: 9/24/2010 10:48:35 AM
Data Type: Original

BJS 9/25/10

Replicate Data: K1008862-001A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.354 | 5.354 | 0.127 | 0.553 | 0.133 | | | 10:48:51 | Yes |
| 2 | 5.674 | 5.674 | 0.135 | 0.586 | 0.141 | | | 10:49:27 | Yes |
| 3 | 5.568 | 5.568 | 0.132 | 0.551 | 0.138 | | | 10:50:03 | Yes |
| Mean: | 5.532 | 5.532 | 0.131 | | | | | | |
| SD: | 0.163 | 0.163 | 0.0039 | | | | | | |
| %RSD: | 2.945 | 2.945 | 2.94 | | | | | | |

Sequence No.: 28
Sample ID: K1008862-001D
Analyst:

Autosampler Location: 23
Date Collected: 9/24/2010 10:50:57 AM
Data Type: Original

Replicate Data: K1008862-001D

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.975 | 1.975 | 0.047 | 0.214 | 0.053 | | | 10:51:14 | Yes |
| 2 | 1.878 | 1.878 | 0.045 | 0.201 | 0.050 | | | 10:51:49 | Yes |
| 3 | 1.771 | 1.771 | 0.042 | 0.195 | 0.048 | | | 10:52:25 | Yes |
| Mean: | 1.875 | 1.875 | 0.045 | | | | | | |
| SD: | 0.102 | 0.102 | 0.0024 | | | | | | |
| %RSD: | 5.452 | 5.452 | 5.45 | | | | | | |

Sequence No.: 29
Sample ID: K1008862-001DA
Analyst:

Autosampler Location: 24
Date Collected: 9/24/2010 10:53:19 AM
Data Type: Original

Replicate Data: K1008862-001DA

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.839 | 4.839 | 0.115 | 0.469 | 0.121 | | | 10:53:36 | Yes |
| 2 | 4.717 | 4.717 | 0.112 | 0.449 | 0.118 | | | 10:54:11 | Yes |
| 3 | 4.454 | 4.454 | 0.106 | 0.410 | 0.112 | | | 10:54:47 | Yes |
| Mean: | 4.670 | 4.670 | 0.111 | | | | | | |
| SD: | 0.196 | 0.196 | 0.0047 | | | | | | |
| %RSD: | 4.206 | 4.206 | 4.21 | | | | | | |

Sequence No.: 30
Sample ID: K1008862-001S
Analyst:

Autosampler Location: 25
Date Collected: 9/24/2010 10:55:41 AM
Data Type: Original

Replicate Data: K1008862-001S

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.717 | 1.717 | 0.041 | 0.196 | 0.047 | | | 10:55:59 | Yes |
| 2 | 1.633 | 1.633 | 0.039 | 0.174 | 0.045 | | | 10:56:34 | Yes |
| 3 | 1.666 | 1.666 | 0.040 | 0.271 | 0.045 | | | 10:57:10 | Yes |
| Mean: | 1.672 | 1.672 | 0.040 | | | | | | |
| SD: | 0.043 | 0.043 | 0.0010 | | | | | | |
| %RSD: | 2.545 | 2.545 | 2.55 | | | | | | |

Sequence No.: 31
Sample ID: K1008862-001SA
Analyst:

Autosampler Location: 26
Date Collected: 9/24/2010 10:58:04 AM
Data Type: Original

---

**Replicate Data: K1008862-001SA**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.098 | 6.098 | 0.145 | 0.603 | 0.151 | | | 10:58:22 | Yes |
| 2 | 6.087 | 6.087 | 0.145 | 0.593 | 0.150 | | | 10:58:58 | Yes |
| 3 | 5.953 | 5.953 | 0.141 | 0.581 | 0.147 | | | 10:59:34 | Yes |
| Mean: | 6.046 | 6.046 | 0.144 | | | | | | |
| SD: | 0.081 | 0.081 | 0.0019 | | | | | | |
| %RSD: | 1.339 | 1.339 | 1.34 | | | | | | |

---

**Sequence No.: 32**
**Sample ID: K1008862-002**
**Analyst:**

**Autosampler Location: 27**
**Date Collected: 9/24/2010 11:00:28 AM**
**Data Type: Original**

---

**Replicate Data: K1008862-002**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.687 | 2.687 | 0.064 | 0.290 | 0.070 | | | 11:00:46 | Yes |
| 2 | 2.476 | 2.476 | 0.059 | 0.266 | 0.065 | | | 11:01:22 | Yes |
| 3 | 2.368 | 2.368 | 0.056 | 0.254 | 0.062 | | | 11:01:58 | Yes |
| Mean: | 2.510 | 2.510 | 0.060 | | | | | | |
| SD: | 0.162 | 0.162 | 0.0039 | | | | | | |
| %RSD: | 6.457 | 6.457 | 6.46 | | | | | | |

---

**Sequence No.: 33**
**Sample ID: K1008862-002A**
**Analyst:**

**Autosampler Location: 28**
**Date Collected: 9/24/2010 11:02:53 AM**
**Data Type: Original**

---

**Replicate Data: K1008862-002A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.769 | 5.769 | 0.137 | 0.563 | 0.143 | | | 11:03:11 | Yes |
| 2 | 7.602 | 7.602 | 0.181 | 0.717 | 0.186 | | | 11:03:47 | Yes |
| 3 | 6.966 | 6.966 | 0.166 | 0.693 | 0.171 | | | 11:04:23 | Yes |
| Mean: | 6.779 | 6.779 | 0.161 | | | | | | |
| SD: | 0.931 | 0.931 | 0.0221 | | | | | | |
| %RSD: | 13.73 | 13.73 | 13.73 | | | | | | |

---

**Sequence No.: 34**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/24/2010 11:05:17 AM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.576 | 7.576 | 0.180 | 0.721 | 0.186 | | | 11:05:35 | Yes |
| 2 | 7.691 | 7.691 | 0.183 | 0.719 | 0.189 | | | 11:06:11 | Yes |
| 3 | 7.575 | 7.575 | 0.180 | 0.717 | 0.186 | | | 11:06:47 | Yes |
| Mean: | 7.614 | 7.614 | 0.181 | | | | | | |
| SD: | 0.066 | 0.066 | 0.0016 | | | | | | |
| %RSD: | 0.873 | 0.873 | 0.87 | | | | | | |

QC value within limits for Se 196.03 Recovery = 101.52%
All analyte(s) passed QC.

---

**Sequence No.: 35**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 11:07:41 AM**
**Data Type: Original**

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.011 | -0.011 | -0.000 | -0.006 | 0.006 | | | 11:07:58 | Yes |
| 2 | 0.048 | 0.048 | 0.001 | 0.029 | 0.007 | | | 11:08:33 | Yes |
| 3 | 0.069 | 0.069 | 0.002 | 0.027 | 0.007 | | | 11:09:09 | Yes |
| Mean: | 0.035 | 0.035 | 0.001 | | | | | | |
| SD: | 0.041 | 0.041 | 0.0010 | | | | | | |
| %RSD: | 116.0 | 116.0 | 116.02 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

**Sequence No.: 36**
**Sample ID: K1008862-003**
**Analyst:**
**Autosampler Location: 29**
**Date Collected: 9/24/2010 11:10:01 AM**
**Data Type: Original**

BSS 9/25/10

**Replicate Data: K1008862-003**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.872 | 0.872 | 0.021 | 0.094 | 0.027 | | | 11:10:20 | Yes |
| 2 | 0.979 | 0.979 | 0.023 | 0.116 | 0.029 | | | 11:10:56 | Yes |
| 3 | 3.532 | 3.532 | 0.084 | 0.478 | 0.090 | | | 11:11:32 | Yes |
| Mean: | 1.795 | 1.795 | 0.043 | | | | | | |
| SD: | 1.506 | 1.506 | 0.0358 | | | | | | |
| %RSD: | 83.92 | 83.92 | 83.92 | | | | | | |

**Sequence No.: 37**
**Sample ID: K1008862-003A**
**Analyst:**
**Autosampler Location: 30**
**Date Collected: 9/24/2010 11:12:27 AM**
**Data Type: Original**

**Replicate Data: K1008862-003A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.706 | 4.706 | 0.112 | 0.478 | 0.118 | | | 11:12:46 | Yes |
| 2 | 4.816 | 4.816 | 0.114 | 0.484 | 0.120 | | | 11:13:22 | Yes |
| 3 | 4.734 | 4.734 | 0.112 | 0.471 | 0.118 | | | 11:13:58 | Yes |
| Mean: | 4.752 | 4.752 | 0.113 | | | | | | |
| SD: | 0.058 | 0.058 | 0.0014 | | | | | | |
| %RSD: | 1.212 | 1.212 | 1.21 | | | | | | |

**Sequence No.: 38**
**Sample ID: K1008862-004**
**Analyst:**
**Autosampler Location: 31**
**Date Collected: 9/24/2010 11:14:53 AM**
**Data Type: Original**

**Replicate Data: K1008862-004**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.217 | 5.217 | 0.124 | 0.490 | 0.130 | | | 11:15:12 | Yes |
| 2 | 4.917 | 4.917 | 0.117 | 0.507 | 0.123 | | | 11:15:48 | Yes |
| 3 | 4.536 | 4.536 | 0.108 | 0.456 | 0.114 | | | 11:16:23 | Yes |
| Mean: | 4.890 | 4.890 | 0.116 | | | | | | |
| SD: | 0.341 | 0.341 | 0.0081 | | | | | | |
| %RSD: | 6.978 | 6.978 | 6.98 | | | | | | |

**Sequence No.: 39**
**Sample ID: K1008862-004A**
**Analyst:**
**Autosampler Location: 32**
**Date Collected: 9/24/2010 11:17:19 AM**
**Data Type: Original**

**Replicate Data: K1008862-004A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.856 | 7.856 | 0.187 | 0.771 | 0.192 | | | 11:17:34 | Yes |
| 2 | 7.735 | 7.735 | 0.184 | 0.757 | 0.190 | | | 11:18:10 | Yes |
| 3 | 7.587 | 7.587 | 0.180 | 0.732 | 0.186 | | | 11:18:45 | Yes |
| Mean: | 7.726 | 7.726 | 0.184 | | | | | | |
| SD: | 0.135 | 0.135 | 0.0032 | | | | | | |
| %RSD: | 1.745 | 1.745 | 1.74 | | | | | | |

==========

**Sequence No.: 40**
**Sample ID: K1008862-005**
**Analyst:**

**Autosampler Location: 33**
**Date Collected: 9/24/2010 11:19:37 AM**
**Data Type: Original**

---

**Replicate Data: K1008862-005**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.925 | 1.925 | 0.046 | 0.211 | 0.052 | | | 11:19:53 | Yes |
| 2 | 1.870 | 1.870 | 0.044 | 0.208 | 0.050 | | | 11:20:29 | Yes |
| 3 | 1.845 | 1.845 | 0.044 | 0.204 | 0.050 | | | 11:21:04 | Yes |
| Mean: | 1.880 | 1.880 | 0.045 | | | | | | |
| SD: | 0.041 | 0.041 | 0.0010 | | | | | | |
| %RSD: | 2.160 | 2.160 | 2.16 | | | | | | |

User canceled analysis.

==========

**Analysis Begun**

**Logged In Analyst: ACQMET10**
**Technique: AA FIAS-Flame**
**Spectrometer Model: AAnalyst 200, S/N 200S5061701**
**Autosampler Model: AS-90**

**Sample Information File: C:\data-AA\ACQMET10\Sample Information\092410-Se1.sif**
**Batch ID: 092410-Se1**
**Results Data Set: 092410-Se1**
**Results Library: R:\ICP\WIP\DATA\K-FLAA-02\Results Se.mdb**

==========

**Sequence No.: 41**
**Sample ID: K1008862-005A**
**Analyst:**

**Autosampler Location: 34**
**Date Collected: 9/24/2010 12:51:18 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-005A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.066 | 6.066 | 0.144 | 0.624 | 0.150 | | | 12:51:34 | Yes |
| 2 | 5.856 | 5.856 | 0.139 | 0.625 | 0.145 | | | 12:52:10 | Yes |
| 3 | 6.023 | 6.023 | 0.143 | 0.639 | 0.149 | | | 12:52:45 | Yes |
| Mean: | 5.982 | 5.982 | 0.142 | | | | | | |
| SD: | 0.111 | 0.111 | 0.0026 | | | | | | |
| %RSD: | 1.849 | 1.849 | 1.85 | | | | | | |

==========

**Sequence No.: 42**
**Sample ID: K1008862-006**
**Analyst:**

**Autosampler Location: 35**
**Date Collected: 9/24/2010 12:53:39 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-006**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.890 | 1.890 | 0.045 | 0.221 | 0.051 | | | 12:53:55 | Yes |
| 2 | 1.864 | 1.864 | 0.044 | 0.220 | 0.050 | | | 12:54:31 | Yes |
| 3 | 1.838 | 1.838 | 0.044 | 0.210 | 0.049 | | | 12:55:07 | Yes |
| Mean: | 1.864 | 1.864 | 0.044 | | | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.026 | 0.026 | 0.0006 |
| %RSD: | 1.381 | 1.381 | 1.38 |

==========

**Sequence No.: 43** **Autosampler Location: 36**
**Sample ID: K1008862-006A** **Date Collected: 9/24/2010 12:55:59 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: K1008862-006A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.013 | 5.013 | 0.119 | 0.529 | 0.125 | | | 12:56:15 | Yes |
| 2 | 5.008 | 5.008 | 0.119 | 0.522 | 0.125 | | | 12:56:51 | Yes |
| 3 | 4.972 | 4.972 | 0.118 | 0.511 | 0.124 | | | 12:57:26 | Yes |
| Mean: | 4.998 | 4.998 | 0.119 | | | | | | |
| SD: | 0.022 | 0.022 | 0.0005 | | | | | | |
| %RSD: | 0.448 | 0.448 | 0.45 | | | | | | |

==========

**Sequence No.: 44** **Autosampler Location: 37**
**Sample ID: K1008862-007** **Date Collected: 9/24/2010 12:58:18 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: K1008862-007**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.158 | 2.158 | 0.051 | 0.247 | 0.057 | | | 12:58:35 | Yes |
| 2 | 2.140 | 2.140 | 0.051 | 0.237 | 0.057 | | | 12:59:10 | Yes |
| 3 | 2.140 | 2.140 | 0.051 | 0.238 | 0.057 | | | 12:59:46 | Yes |
| Mean: | 2.146 | 2.146 | 0.051 | | | | | | |
| SD: | 0.010 | 0.010 | 0.0002 | | | | | | |
| %RSD: | 0.473 | 0.473 | 0.47 | | | | | | |

==========

**Sequence No.: 45** **Autosampler Location: 38**
**Sample ID: K1008862-007A** **Date Collected: 9/24/2010 1:00:39 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: K1008862-007A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.576 | 5.576 | 0.132 | 0.570 | 0.138 | | | 13:00:56 | Yes |
| 2 | 5.522 | 5.522 | 0.131 | 0.562 | 0.137 | | | 13:01:32 | Yes |
| 3 | 5.551 | 5.551 | 0.132 | 0.559 | 0.138 | | | 13:02:08 | Yes |
| Mean: | 5.550 | 5.550 | 0.132 | | | | | | |
| SD: | 0.027 | 0.027 | 0.0006 | | | | | | |
| %RSD: | 0.484 | 0.484 | 0.48 | | | | | | |

==========

**Sequence No.: 46** **Autosampler Location: 5**
**Sample ID: CCV** **Date Collected: 9/24/2010 1:03:01 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.038 | 7.038 | 0.167 | 0.708 | 0.173 | | | 13:03:19 | Yes |
| 2 | 7.116 | 7.116 | 0.169 | 0.709 | 0.175 | | | 13:03:54 | Yes |
| 3 | 7.196 | 7.196 | 0.171 | 0.708 | 0.177 | | | 13:04:30 | Yes |
| Mean: | 7.117 | 7.117 | 0.169 | | | | | | |
| SD: | 0.079 | 0.079 | 0.0019 | | | | | | |
| %RSD: | 1.105 | 1.105 | 1.11 | | | | | | |

QC value within limits for Se 196.03 Recovery = 94.89%

All analyte(s) passed QC.

**Sequence No.: 47**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 1:05:24 PM**
**Data Type: Original**

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.107 | 0.107 | 0.003 | 0.039 | 0.008 | | | 13:05:41 | Yes |
| 2 | 0.065 | 0.065 | 0.002 | 0.028 | 0.007 | | | 13:06:16 | Yes |
| 3 | 0.044 | 0.044 | 0.001 | 0.033 | 0.007 | | | 13:06:52 | Yes |
| Mean: | 0.072 | 0.072 | 0.002 | | | | | | |
| SD: | 0.032 | 0.032 | 0.0008 | | | | | | |
| %RSD: | 44.53 | 44.53 | 44.53 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

**Sequence No.: 48**
**Sample ID: K1008862-008**
**Analyst:**

**Autosampler Location: 39**
**Date Collected: 9/24/2010 1:07:44 PM**
**Data Type: Original**

**Replicate Data: K1008862-008**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.229 | 2.229 | 0.053 | 0.239 | 0.059 | | | 13:08:01 | Yes |
| 2 | 2.205 | 2.205 | 0.052 | 0.237 | 0.058 | | | 13:08:37 | Yes |
| 3 | 2.207 | 2.207 | 0.052 | 0.241 | 0.058 | | | 13:09:13 | Yes |
| Mean: | 2.214 | 2.214 | 0.053 | | | | | | |
| SD: | 0.013 | 0.013 | 0.0003 | | | | | | |
| %RSD: | 0.594 | 0.594 | 0.59 | | | | | | |

**Sequence No.: 49**
**Sample ID: K1008862-008A**
**Analyst:**

**Autosampler Location: 40**
**Date Collected: 9/24/2010 1:10:06 PM**
**Data Type: Original**

**Replicate Data: K1008862-008A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.538 | 5.538 | 0.132 | 0.533 | 0.137 | | | 13:10:24 | Yes |
| 2 | 5.396 | 5.396 | 0.128 | 0.535 | 0.134 | | | 13:10:59 | Yes |
| 3 | 5.394 | 5.394 | 0.128 | 0.545 | 0.134 | | | 13:11:35 | Yes |
| Mean: | 5.442 | 5.442 | 0.129 | | | | | | |
| SD: | 0.082 | 0.082 | 0.0020 | | | | | | |
| %RSD: | 1.514 | 1.514 | 1.51 | | | | | | |

**Sequence No.: 50**
**Sample ID: K1008862-009**
**Analyst:**

**Autosampler Location: 41**
**Date Collected: 9/24/2010 1:12:28 PM**
**Data Type: Original**

**Replicate Data: K1008862-009**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.289 | 2.289 | 0.054 | 0.242 | 0.060 | | | 13:12:46 | Yes |
| 2 | 2.246 | 2.246 | 0.053 | 0.248 | 0.059 | | | 13:13:21 | Yes |
| 3 | 2.248 | 2.248 | 0.053 | 0.236 | 0.059 | | | 13:13:57 | Yes |
| Mean: | 2.261 | 2.261 | 0.054 | | | | | | |
| SD: | 0.024 | 0.024 | 0.0006 | | | | | | |
| %RSD: | 1.062 | 1.062 | 1.06 | | | | | | |

**Sequence No.: 51**
**Sample ID: K1008862-009A**
**Analyst:**

**Autosampler Location: 42**
**Date Collected: 9/24/2010 1:14:51 PM**
**Data Type: Original**

**Replicate Data: K1008862-009A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.500 | 5.500 | 0.131 | 0.545 | 0.136 | | | 13:15:08 | Yes |
| 2 | 5.528 | 5.528 | 0.131 | 0.546 | 0.137 | | | 13:15:44 | Yes |
| 3 | 5.662 | 5.662 | 0.135 | 0.547 | 0.140 | | | 13:16:20 | Yes |
| Mean: | 5.563 | 5.563 | 0.132 | | | | | | |
| SD: | 0.087 | 0.087 | 0.0021 | | | | | | |
| %RSD: | 1.559 | 1.559 | 1.56 | | | | | | |

**Sequence No.: 52**
**Sample ID: K1008862-010**
**Analyst:**

**Autosampler Location: 43**
**Date Collected: 9/24/2010 1:17:14 PM**
**Data Type: Original**

**Replicate Data: K1008862-010**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.230 | 2.230 | 0.053 | 0.231 | 0.059 | | | 13:17:31 | Yes |
| 2 | 2.111 | 2.111 | 0.050 | 0.222 | 0.056 | | | 13:18:07 | Yes |
| 3 | 2.137 | 2.137 | 0.051 | 0.225 | 0.057 | | | 13:18:43 | Yes |
| Mean: | 2.159 | 2.159 | 0.051 | | | | | | |
| SD: | 0.062 | 0.062 | 0.0015 | | | | | | |
| %RSD: | 2.893 | 2.893 | 2.89 | | | | | | |

**Sequence No.: 53**
**Sample ID: K1008862-010A**
**Analyst:**

**Autosampler Location: 44**
**Date Collected: 9/24/2010 1:19:38 PM**
**Data Type: Original**

**Replicate Data: K1008862-010A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.545 | 5.545 | 0.132 | 0.689 | 0.138 | | | 13:19:55 | Yes |
| 2 | 6.377 | 6.377 | 0.152 | 0.603 | 0.157 | | | 13:20:32 | Yes |
| 3 | 5.986 | 5.986 | 0.142 | 0.605 | 0.148 | | | 13:21:07 | Yes |
| Mean: | 5.970 | 5.970 | 0.142 | | | | | | |
| SD: | 0.416 | 0.416 | 0.0099 | | | | | | |
| %RSD: | 6.970 | 6.970 | 6.97 | | | | | | |

**Sequence No.: 54**
**Sample ID: K1008862-011**
**Analyst:**

**Autosampler Location: 45**
**Date Collected: 9/24/2010 1:22:02 PM**
**Data Type: Original**

BSS 9/28/10

**Replicate Data: K1008862-011**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.029 | 2.029 | 0.048 | 0.232 | 0.054 | | | 13:22:20 | Yes |
| 2 | 1.945 | 1.945 | 0.046 | 0.212 | 0.052 | | | 13:22:56 | Yes |
| 3 | 5.416 | 5.416 | 0.129 | 0.580 | 0.134 | | | 13:23:32 | Yes |
| Mean: | 3.130 | 3.130 | 0.074 | | | | | | |
| SD: | 1.980 | 1.980 | 0.0470 | | | | | | |
| %RSD: | 63.26 | 63.26 | 63.26 | | | | | | |

**Sequence No.: 55**

**Autosampler Location: 46**

**Sample ID: K1008862-011A**
**Analyst:**

**Date Collected: 9/24/2010 1:24:27 PM**
**Data Type: Original**

BSS 9/25/10

**Replicate Data: K1008862-011A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.999 | 4.999 | 0.119 | 0.532 | 0.125 | | | 13:24:45 | Yes |
| 2 | 5.009 | 5.009 | 0.119 | 0.524 | 0.125 | | | 13:25:22 | Yes |
| 3 | 4.980 | 4.980 | 0.118 | 0.515 | 0.124 | | | 13:25:57 | Yes |
| Mean: | 4.996 | 4.996 | 0.119 | | | | | | |
| SD: | 0.015 | 0.015 | 0.0004 | | | | | | |
| %RSD: | 0.299 | 0.299 | 0.30 | | | | | | |

**Sequence No.: 56**
**Sample ID: K1008862-012**
**Analyst:**

**Autosampler Location: 47**
**Date Collected: 9/24/2010 1:26:52 PM**
**Data Type: Original**

**Replicate Data: K1008862-012**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.324 | 2.324 | 0.055 | 0.264 | 0.061 | | | 13:27:12 | Yes |
| 2 | 2.120 | 2.120 | 0.050 | 0.242 | 0.056 | | | 13:27:47 | Yes |
| 3 | 2.095 | 2.095 | 0.050 | 0.213 | 0.056 | | | 13:28:23 | Yes |
| Mean: | 2.180 | 2.180 | 0.052 | | | | | | |
| SD: | 0.126 | 0.126 | 0.0030 | | | | | | |
| %RSD: | 5.767 | 5.767 | 5.77 | | | | | | |

**Sequence No.: 57**
**Sample ID: K1008862-012A**
**Analyst:**

**Autosampler Location: 48**
**Date Collected: 9/24/2010 1:29:19 PM**
**Data Type: Original**

**Replicate Data: K1008862-012A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.422 | 4.422 | 0.105 | 0.403 | 0.111 | | | 13:29:34 | Yes |
| 2 | 4.592 | 4.592 | 0.109 | 0.455 | 0.115 | | | 13:30:10 | Yes |
| 3 | 4.591 | 4.591 | 0.109 | 0.474 | 0.115 | | | 13:30:46 | Yes |
| Mean: | 4.535 | 4.535 | 0.108 | | | | | | |
| SD: | 0.098 | 0.098 | 0.0023 | | | | | | |
| %RSD: | 2.164 | 2.164 | 2.16 | | | | | | |

**Sequence No.: 58**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/24/2010 1:31:37 PM**
**Data Type: Original**

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.300 | 7.300 | 0.173 | 0.710 | 0.179 | | | 13:31:55 | Yes |
| 2 | 7.504 | 7.504 | 0.178 | 0.707 | 0.184 | | | 13:32:31 | Yes |
| 3 | 7.380 | 7.380 | 0.175 | 0.721 | 0.181 | | | 13:33:07 | Yes |
| Mean: | 7.395 | 7.395 | 0.176 | | | | | | |
| SD: | 0.103 | 0.103 | 0.0024 | | | | | | |
| %RSD: | 1.391 | 1.391 | 1.39 | | | | | | |

QC value within limits for Se 196.03 Recovery = 98.60%
All analyte(s) passed QC.

**Sequence No.: 59**
**Sample ID: CCB**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 1:34:00 PM**

**Analyst:** **Data Type: Original**

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.102 | 0.102 | 0.002 | 0.044 | 0.008 | | | 13:34:16 | Yes |
| 2 | 0.024 | 0.024 | 0.001 | 0.020 | 0.006 | | | 13:34:52 | Yes |
| 3 | 0.254 | 0.254 | 0.006 | 0.084 | 0.012 | | | 13:35:27 | Yes |
| Mean: | 0.127 | 0.127 | 0.003 | | | | | | |
| SD: | 0.117 | 0.117 | 0.0028 | | | | | | |
| %RSD: | 92.30 | 92.30 | 92.30 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

**Sequence No.: 60** **Autosampler Location: 49**
**Sample ID: K1008862-013** **Date Collected: 9/24/2010 1:36:20 PM**
**Analyst:** **Data Type: Original**

**Replicate Data: K1008862-013**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.393 | 3.393 | 0.081 | 0.368 | 0.086 | | | 13:36:36 | Yes |
| 2 | 3.141 | 3.141 | 0.075 | 0.344 | 0.080 | | | 13:37:12 | Yes |
| 3 | 3.072 | 3.072 | 0.073 | 0.321 | 0.079 | | | 13:37:48 | Yes |
| Mean: | 3.202 | 3.202 | 0.076 | | | | | | |
| SD: | 0.169 | 0.169 | 0.0040 | | | | | | |
| %RSD: | 5.273 | 5.273 | 5.27 | | | | | | |

**Sequence No.: 61** **Autosampler Location: 50**
**Sample ID: K1008862-013A** **Date Collected: 9/24/2010 1:38:39 PM**
**Analyst:** **Data Type: Original**

**Replicate Data: K1008862-013A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.414 | 7.414 | 0.176 | 0.741 | 0.182 | | | 13:38:54 | Yes |
| 2 | 7.206 | 7.206 | 0.171 | 0.712 | 0.177 | | | 13:39:30 | Yes |
| 3 | 7.128 | 7.128 | 0.169 | 0.716 | 0.175 | | | 13:40:06 | Yes |
| Mean: | 7.249 | 7.249 | 0.172 | | | | | | |
| SD: | 0.148 | 0.148 | 0.0035 | | | | | | |
| %RSD: | 2.040 | 2.040 | 2.04 | | | | | | |

**Sequence No.: 62** **Autosampler Location: 51**
**Sample ID: K1008862-014** **Date Collected: 9/24/2010 1:40:58 PM**
**Analyst:** **Data Type: Original**

**Replicate Data: K1008862-014**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.742 | 2.742 | 0.065 | 0.294 | 0.071 | | | 13:41:14 | Yes |
| 2 | 2.854 | 2.854 | 0.068 | 0.287 | 0.074 | | | 13:41:50 | Yes |
| 3 | 2.659 | 2.659 | 0.063 | 0.279 | 0.069 | | | 13:42:26 | Yes |
| Mean: | 2.752 | 2.752 | 0.065 | | | | | | |
| SD: | 0.097 | 0.097 | 0.0023 | | | | | | |
| %RSD: | 3.541 | 3.541 | 3.54 | | | | | | |

**Sequence No.: 63** **Autosampler Location: 52**
**Sample ID: K1008862-014A** **Date Collected: 9/24/2010 1:43:18 PM**
**Analyst:** **Data Type: Original**

Replicate Data: K1008862-014A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.052 | 6.052 | 0.144 | 0.611 | 0.150 | | | 13:43:34 | Yes |
| 2 | 7.362 | 7.362 | 0.175 | 0.741 | 0.181 | | | 13:44:10 | Yes |
| 3 | 7.122 | 7.122 | 0.169 | 0.712 | 0.175 | | | 13:44:46 | Yes |
| Mean: | 6.845 | 6.845 | 0.163 | | | | | | |
| SD: | 0.697 | 0.697 | 0.0166 | | | | | | |
| %RSD: | 10.19 | 10.19 | 10.19 | | | | | | |

Sequence No.: 64
Sample ID: K1008862-015
Analyst:
Autosampler Location: 53
Date Collected: 9/24/2010 1:45:38 PM
Data Type: Original

Replicate Data: K1008862-015

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.581 | 2.581 | 0.061 | 0.277 | 0.067 | | | 13:45:55 | Yes |
| 2 | 2.454 | 2.454 | 0.058 | 0.264 | 0.064 | | | 13:46:30 | Yes |
| 3 | 2.332 | 2.332 | 0.055 | 0.257 | 0.061 | | | 13:47:06 | Yes |
| Mean: | 2.456 | 2.456 | 0.058 | | | | | | |
| SD: | 0.124 | 0.124 | 0.0029 | | | | | | |
| %RSD: | 5.054 | 5.054 | 5.05 | | | | | | |

Sequence No.: 65
Sample ID: K1008862-015A
Analyst:
Autosampler Location: 54
Date Collected: 9/24/2010 1:47:59 PM
Data Type: Original

Replicate Data: K1008862-015A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.497 | 5.497 | 0.131 | 0.548 | 0.136 | | | 13:48:15 | Yes |
| 2 | 5.356 | 5.356 | 0.127 | 0.538 | 0.133 | | | 13:48:51 | Yes |
| 3 | 5.912 | 5.912 | 0.140 | 0.622 | 0.146 | | | 13:49:26 | Yes |
| Mean: | 5.588 | 5.588 | 0.133 | | | | | | |
| SD: | 0.289 | 0.289 | 0.0069 | | | | | | |
| %RSD: | 5.164 | 5.164 | 5.16 | | | | | | |

Sequence No.: 66
Sample ID: K1008862-016
Analyst:
Autosampler Location: 55
Date Collected: 9/24/2010 1:50:20 PM
Data Type: Original

Replicate Data: K1008862-016

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.185 | 0.185 | 0.004 | 0.019 | 0.010 | | | 13:50:36 | Yes |
| 2 | 0.224 | 0.224 | 0.005 | 0.041 | 0.011 | | | 13:51:12 | Yes |
| 3 | 0.184 | 0.184 | 0.004 | 0.038 | 0.010 | | | 13:51:48 | Yes |
| Mean: | 0.198 | 0.198 | 0.005 | | | | | | |
| SD: | 0.023 | 0.023 | 0.0005 | | | | | | |
| %RSD: | 11.53 | 11.53 | 11.53 | | | | | | |

Sequence No.: 67
Sample ID: K1008862-016A
Analyst:
Autosampler Location: 56
Date Collected: 9/24/2010 1:52:41 PM
Data Type: Original

Replicate Data: K1008862-016A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.749 | 3.749 | 0.089 | 0.377 | 0.095 | | | 13:52:58 | Yes |
| 2 | 3.839 | 3.839 | 0.091 | 0.375 | 0.097 | | | 13:53:34 | Yes |
| 3 | 3.639 | 3.639 | 0.086 | 0.347 | 0.092 | | | 13:54:09 | Yes |
| Mean: | 3.742 | 3.742 | 0.089 | | | | | | |
| SD: | 0.101 | 0.101 | 0.0024 | | | | | | |
| %RSD: | 2.689 | 2.689 | 2.69 | | | | | | |

==========

**Sequence No.: 68**
**Sample ID: K1008862-017**
**Analyst:**

**Autosampler Location: 57**
**Date Collected: 9/24/2010 1:55:03 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-017**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.912 | 1.912 | 0.045 | 0.230 | 0.051 | | | 13:55:21 | Yes |
| 2 | 1.990 | 1.990 | 0.047 | 0.226 | 0.053 | | | 13:55:57 | Yes |
| 3 | 1.976 | 1.976 | 0.047 | 0.225 | 0.053 | | | 13:56:32 | Yes |
| Mean: | 1.959 | 1.959 | 0.047 | | | | | | |
| SD: | 0.042 | 0.042 | 0.0010 | | | | | | |
| %RSD: | 2.120 | 2.120 | 2.12 | | | | | | |

RJS 9/25/10

==========

**Sequence No.: 69**
**Sample ID: K1008862-017A**
**Analyst:**

**Autosampler Location: 58**
**Date Collected: 9/24/2010 1:57:26 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-017A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.680 | 4.680 | 0.111 | 0.494 | 0.117 | | | 13:57:44 | Yes |
| 2 | 4.648 | 4.648 | 0.110 | 0.468 | 0.116 | | | 13:58:19 | Yes |
| 3 | 6.879 | 6.879 | 0.163 | 0.684 | 0.169 | | | 13:58:55 | Yes |
| Mean: | 5.402 | 5.402 | 0.128 | | | | | | |
| SD: | 1.279 | 1.279 | 0.0304 | | | | | | |
| %RSD: | 23.68 | 23.68 | 23.68 | | | | | | |

==========

**Sequence No.: 70**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/24/2010 1:59:50 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.595 | 7.595 | 0.180 | 0.722 | 0.186 | | | 14:00:08 | Yes |
| 2 | 7.282 | 7.282 | 0.173 | 0.727 | 0.179 | | | 14:00:43 | Yes |
| 3 | 7.335 | 7.335 | 0.174 | 0.714 | 0.180 | | | 14:01:19 | Yes |
| Mean: | 7.404 | 7.404 | 0.176 | | | | | | |
| SD: | 0.168 | 0.168 | 0.0040 | | | | | | |
| %RSD: | 2.264 | 2.264 | 2.26 | | | | | | |

QC value within limits for Se 196.03 Recovery = 98.72%
All analyte(s) passed QC.

==========

**Sequence No.: 71**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 2:02:13 PM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl | SampleConc | StndConc | BlnkCorr | Peak | Peak | Bkgnd | Bkgnd | Time | Peak |
|---|---|---|---|---|---|---|---|---|---|

| # | ug/L | ug/L | Signal | Area | Height | Area | Height | | Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.074 | 0.074 | 0.002 | 0.027 | 0.008 | | | 14:02:29 | Yes |
| 2 | 0.027 | 0.027 | 0.001 | 0.010 | 0.006 | | | 14:03:05 | Yes |
| 3 | 0.057 | 0.057 | 0.001 | 0.030 | 0.007 | | | 14:03:41 | Yes |
| Mean: | 0.053 | 0.053 | 0.001 | | | | | | |
| SD: | 0.023 | 0.023 | 0.0006 | | | | | | |
| %RSD: | 44.57 | 44.57 | 44.57 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 72**
**Sample ID: K1008862-018**
**Analyst:**

**Autosampler Location: 59**
**Date Collected: 9/24/2010 2:04:33 PM**
**Data Type: Original**

**Replicate Data: K1008862-018**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.450 | 1.450 | 0.034 | 0.153 | 0.040 | | | 14:04:51 | Yes |
| 2 | 1.479 | 1.479 | 0.035 | 0.156 | 0.041 | | | 14:05:27 | Yes |
| 3 | 1.548 | 1.548 | 0.037 | 0.174 | 0.043 | | | 14:06:03 | Yes |
| Mean: | 1.492 | 1.492 | 0.035 | | | | | | |
| SD: | 0.050 | 0.050 | 0.0012 | | | | | | |
| %RSD: | 3.363 | 3.363 | 3.36 | | | | | | |

---

**Sequence No.: 73**
**Sample ID: K1008862-018A**
**Analyst:**

**Autosampler Location: 60**
**Date Collected: 9/24/2010 2:06:57 PM**
**Data Type: Original**

**Replicate Data: K1008862-018A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.485 | 4.485 | 0.107 | 0.441 | 0.112 | | | 14:07:16 | Yes |
| 2 | 4.523 | 4.523 | 0.107 | 0.447 | 0.113 | | | 14:07:52 | Yes |
| 3 | 4.723 | 4.723 | 0.112 | 0.454 | 0.118 | | | 14:08:27 | Yes |
| Mean: | 4.577 | 4.577 | 0.109 | | | | | | |
| SD: | 0.128 | 0.128 | 0.0030 | | | | | | |
| %RSD: | 2.794 | 2.794 | 2.79 | | | | | | |

---

**Sequence No.: 74**
**Sample ID: K1008862-019**
**Analyst:**

**Autosampler Location: 61**
**Date Collected: 9/24/2010 2:09:21 PM**
**Data Type: Original**

BSS 9/25/10

**Replicate Data: K1008862-019**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.350 | 1.350 | 0.032 | 0.145 | 0.038 | | | 14:09:39 | Yes |
| 2 | 1.289 | 1.289 | 0.031 | 0.130 | 0.036 | | | 14:10:15 | Yes |
| 3 | 2.632 | 2.632 | 0.063 | 0.222 | 0.068 | | | 14:10:51 | Yes |
| Mean: | 1.757 | 1.757 | 0.042 | | | | | | |
| SD: | 0.758 | 0.758 | 0.0180 | | | | | | |
| %RSD: | 43.15 | 43.15 | 43.15 | | | | | | |

---

**Sequence No.: 75**
**Sample ID: K1008862-019A**
**Analyst:**

**Autosampler Location: 62**
**Date Collected: 9/24/2010 2:11:46 PM**
**Data Type: Original**

**Replicate Data: K1008862-019A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 5.158 | 5.158 | 0.123 | 0.511 | 0.128 | | 14:12:04 | Yes |
| 2 | 5.522 | 5.522 | 0.131 | 0.580 | 0.137 | | 14:12:40 | Yes |
| 3 | 5.048 | 5.048 | 0.120 | 0.489 | 0.126 | | 14:13:16 | Yes |
| Mean: | 5.243 | 5.243 | 0.125 | | | | | |
| SD: | 0.248 | 0.248 | 0.0059 | | | | | |
| %RSD: | 4.731 | 4.731 | 4.73 | | | | | |

BJS 9/25/10

==========

**Sequence No.: 76**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/24/2010 2:14:11 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.567 | 7.567 | 0.180 | 0.705 | 0.186 | | | 14:14:28 | Yes |
| 2 | 7.376 | 7.376 | 0.175 | 0.726 | 0.181 | | | 14:15:04 | Yes |
| 3 | 7.332 | 7.332 | 0.174 | 0.781 | 0.180 | | | 14:15:40 | Yes |
| Mean: | 7.425 | 7.425 | 0.176 | | | | | | |
| SD: | 0.125 | 0.125 | 0.0030 | | | | | | |
| %RSD: | 1.680 | 1.680 | 1.68 | | | | | | |

QC value within limits for Se 196.03 Recovery = 99.00%
All analyte(s) passed QC.

==========

**Sequence No.: 77**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/24/2010 2:16:35 PM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.088 | 0.088 | 0.002 | 0.023 | 0.008 | | | 14:16:50 | Yes |
| 2 | 0.017 | 0.017 | 0.000 | 0.021 | 0.006 | | | 14:17:26 | Yes |
| 3 | 0.033 | 0.033 | 0.001 | 0.019 | 0.007 | | | 14:18:02 | Yes |
| Mean: | 0.046 | 0.046 | 0.001 | | | | | | |
| SD: | 0.037 | 0.037 | 0.0009 | | | | | | |
| %RSD: | 81.37 | 81.37 | 81.37 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

==========

**Analysis Begun**

**Logged In Analyst: ACQMET10**
**Spectrometer Model: AAnalyst 200, S/N 200S5061701**

**Technique: AA FIAS-Flame**
**Autosampler Model: AS-90**

**Sample Information File: C:\data-AA\ACQMET10\Sample Information\092410-Se1.sif**
**Batch ID: 092410-Se1**
**Results Data Set: 092410-Se1**
**Results Library: R:\ICP\WIP\DATA\K-FLAA-02\Results Se.mdb**

==========

**Sequence No.: 78**
**Sample ID: K1008857-MB**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:19:19 PM**
**Data Type: Original**

---

**Replicate Data: K1008857-MB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.139 | -0.139 | -0.003 | 0.009 | 0.003 | | | 14:19:31 | Yes |
| 2 | -0.102 | -0.102 | -0.002 | 0.014 | 0.003 | | | 14:20:07 | Yes |
| 3 | -0.118 | -0.118 | -0.003 | 0.013 | 0.003 | | | 14:20:42 | Yes |
| Mean: | -0.120 | -0.120 | -0.003 | | | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.018 | 0.018 | 0.0004 |
| %RSD: | 15.42 | 15.42 | 15.42 |

==========

**Sequence No.: 79**
**Sample ID: K1008857-002D**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:21:52 PM**
**Data Type: Original**

---

**Replicate Data: K1008857-002D**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.118 | 1.118 | 0.027 | 0.131 | 0.032 | | | 14:22:03 | Yes |
| 2 | 1.119 | 1.119 | 0.027 | 0.135 | 0.032 | | | 14:22:39 | Yes |
| 3 | 1.087 | 1.087 | 0.026 | 0.128 | 0.032 | | | 14:23:15 | Yes |
| Mean: | 1.108 | 1.108 | 0.026 | | | | | | |
| SD: | 0.018 | 0.018 | 0.0004 | | | | | | |
| %RSD: | 1.604 | 1.604 | 1.60 | | | | | | |

==========

**Sequence No.: 80**
**Sample ID: K1008857-002DA**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:23:59 PM**
**Data Type: Original**

---

**Replicate Data: K1008857-002DA**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.119 | 5.119 | 0.122 | 0.497 | 0.127 | | | 14:24:10 | Yes |
| 2 | 5.056 | 5.056 | 0.120 | 0.498 | 0.126 | | | 14:24:46 | Yes |
| 3 | 5.407 | 5.407 | 0.128 | 0.529 | 0.134 | | | 14:25:22 | Yes |
| Mean: | 5.194 | 5.194 | 0.123 | | | | | | |
| SD: | 0.187 | 0.187 | 0.0045 | | | | | | |
| %RSD: | 3.608 | 3.608 | 3.61 | | | | | | |

==========

**Sequence No.: 81**
**Sample ID: K1008857-002**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:26:02 PM**
**Data Type: Original**

---

**Replicate Data: K1008857-002**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.289 | 1.289 | 0.031 | 0.155 | 0.036 | | | 14:26:13 | Yes |
| 2 | 1.183 | 1.183 | 0.028 | 0.131 | 0.034 | | | 14:26:49 | Yes |
| 3 | 1.695 | 1.695 | 0.040 | 0.167 | 0.046 | | | 14:27:25 | Yes |
| Mean: | 1.389 | 1.389 | 0.033 | | | | | | |
| SD: | 0.270 | 0.270 | 0.0064 | | | | | | |
| %RSD: | 19.42 | 19.42 | 19.42 | | | | | | |

==========

**Sequence No.: 82**
**Sample ID: K1008857-002A**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:28:05 PM**
**Data Type: Original**

---

**Replicate Data: K1008857-002A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.744 | 5.744 | 0.136 | 0.568 | 0.142 | | | 14:28:17 | Yes |
| 2 | 5.869 | 5.869 | 0.139 | 0.571 | 0.145 | | | 14:28:52 | Yes |
| 3 | 5.935 | 5.935 | 0.141 | 0.579 | 0.147 | | | 14:29:28 | Yes |
| Mean: | 5.849 | 5.849 | 0.139 | | | | | | |
| SD: | 0.097 | 0.097 | 0.0023 | | | | | | |
| %RSD: | 1.657 | 1.657 | 1.66 | | | | | | |

Sequence No.: 83
Sample ID: K1008862-001D
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:30:09 PM
Data Type: Original

Replicate Data: K1008862-001D

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.744 | 2.744 | 0.065 | 0.321 | 0.071 | | | 14:30:20 | Yes |
| 2 | 2.201 | 2.201 | 0.052 | 0.248 | 0.058 | | | 14:30:56 | Yes |
| 3 | 2.053 | 2.053 | 0.049 | 0.232 | 0.055 | | | 14:31:32 | Yes |
| Mean: | 2.333 | 2.333 | 0.055 | | | | | | |
| SD: | 0.364 | 0.364 | 0.0086 | | | | | | |
| %RSD: | 15.59 | 15.59 | 15.59 | | | | | | |

BJS 9/25/10

Sequence No.: 84
Sample ID: K1008862-001
Analyst:
User canceled analysis.

Autosampler Location:
Date Collected: 9/24/2010 2:33:05 PM
Data Type: Original

Sequence No.: 85
Sample ID: K1008862-001
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:33:19 PM
Data Type: Original

Replicate Data: K1008862-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.500 | 1.500 | 0.036 | 0.175 | 0.041 | | | 14:33:30 | Yes |
| 2 | 2.634 | 2.634 | 0.063 | 0.280 | 0.068 | | | 14:34:06 | Yes |
| 3 | 2.193 | 2.193 | 0.052 | 0.243 | 0.058 | | | 14:34:41 | Yes |
| Mean: | 2.109 | 2.109 | 0.050 | | | | | | |
| SD: | 0.572 | 0.572 | 0.0136 | | | | | | |
| %RSD: | 27.10 | 27.10 | 27.10 | | | | | | |

Sequence No.: 86
Sample ID: K1008862-001
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:35:20 PM
Data Type: Original

Replicate Data: K1008862-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.867 | 1.867 | 0.044 | 0.208 | 0.050 | | | 14:35:31 | Yes |
| 2 | 1.845 | 1.845 | 0.044 | 0.207 | 0.050 | | | 14:36:06 | Yes |
| 3 | 1.693 | 1.693 | 0.040 | 0.184 | 0.046 | | | 14:36:42 | Yes |
| Mean: | 1.802 | 1.802 | 0.043 | | | | | | |
| SD: | 0.095 | 0.095 | 0.0023 | | | | | | |
| %RSD: | 5.258 | 5.258 | 5.26 | | | | | | |

Sequence No.: 87
Sample ID: K1008862-001A
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:39:02 PM
Data Type: Original

Replicate Data: K1008862-001A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.181 | 4.181 | 0.099 | 0.414 | 0.105 | | | 14:39:14 | Yes |
| 2 | 4.299 | 4.299 | 0.102 | 0.432 | 0.108 | | | 14:39:50 | Yes |
| 3 | 4.676 | 4.676 | 0.111 | 0.470 | 0.117 | | | 14:40:26 | Yes |
| Mean: | 4.385 | 4.385 | 0.104 | | | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.258 | 0.258 | 0.0061 |
| %RSD: | 5.893 | 5.893 | 5.89 |

==========

**Sequence No.: 88**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:42:50 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.213 | 7.213 | 0.171 | 0.705 | 0.177 | | | 14:43:01 | Yes |
| 2 | 7.205 | 7.205 | 0.171 | 0.710 | 0.177 | | | 14:43:37 | Yes |
| 3 | 7.262 | 7.262 | 0.173 | 0.709 | 0.178 | | | 14:44:13 | Yes |
| Mean: | 7.227 | 7.227 | 0.172 | | | | | | |
| SD: | 0.031 | 0.031 | 0.0007 | | | | | | |
| %RSD: | 0.422 | 0.422 | 0.42 | | | | | | |

==========

**Sequence No.: 89**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:46:53 PM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.142 | 0.142 | 0.003 | 0.030 | 0.009 | | | 14:47:04 | Yes |
| 2 | 0.061 | 0.061 | 0.001 | 0.038 | 0.007 | | | 14:47:40 | Yes |
| 3 | 0.053 | 0.053 | 0.001 | 0.018 | 0.007 | | | 14:48:16 | Yes |
| Mean: | 0.085 | 0.085 | 0.002 | | | | | | |
| SD: | 0.049 | 0.049 | 0.0012 | | | | | | |
| %RSD: | 57.41 | 57.41 | 57.41 | | | | | | |

==========

**Sequence No.: 90**
**Sample ID: K1008862-003**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:50:44 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-003**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.892 | 0.892 | 0.021 | 0.111 | 0.027 | | | 14:50:55 | Yes |
| 2 | 1.147 | 1.147 | 0.027 | 0.126 | 0.033 | | | 14:51:31 | Yes |
| 3 | 1.180 | 1.180 | 0.028 | 0.139 | 0.034 | | | 14:52:07 | Yes |
| Mean: | 1.073 | 1.073 | 0.025 | | | | | | |
| SD: | 0.158 | 0.158 | 0.0037 | | | | | | |
| %RSD: | 14.70 | 14.70 | 14.70 | | | | | | |

==========

**Sequence No.: 91**
**Sample ID: K1008862-003A**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 2:52:47 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-003A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.725 | 3.725 | 0.089 | 0.359 | 0.094 | | | 14:52:58 | Yes |
| 2 | 3.923 | 3.923 | 0.093 | 0.388 | 0.099 | | | 14:53:34 | Yes |
| 3 | 3.967 | 3.967 | 0.094 | 0.388 | 0.100 | | | 14:54:10 | Yes |
| Mean: | 3.872 | 3.872 | 0.092 | | | | | | |
| SD: | 0.129 | 0.129 | 0.0031 | | | | | | |
| %RSD: | 3.332 | 3.332 | 3.33 | | | | | | |

Sequence No.: 92
Sample ID: K1008862-011
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:54:52 PM
Data Type: Original

Replicate Data: K1008862-011

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.372 | 1.372 | 0.033 | 0.156 | 0.038 | | | 14:55:04 | Yes |
| 2 | 1.414 | 1.414 | 0.034 | 0.152 | 0.039 | | | 14:55:40 | Yes |
| 3 | 1.365 | 1.365 | 0.032 | 0.151 | 0.038 | | | 14:56:16 | Yes |
| Mean: | 1.384 | 1.384 | 0.033 | | | | | | |
| SD: | 0.026 | 0.026 | 0.0006 | | | | | | |
| %RSD: | 1.911 | 1.911 | 1.91 | | | | | | |

Sequence No.: 93
Sample ID: K1008862-011A
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:57:26 PM
Data Type: Original

Replicate Data: K1008862-011A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.055 | 4.055 | 0.096 | 0.397 | 0.102 | | | 14:57:38 | Yes |
| 2 | 4.042 | 4.042 | 0.096 | 0.397 | 0.102 | | | 14:58:14 | Yes |
| 3 | 4.035 | 4.035 | 0.096 | 0.391 | 0.102 | | | 14:58:49 | Yes |
| Mean: | 4.044 | 4.044 | 0.096 | | | | | | |
| SD: | 0.010 | 0.010 | 0.0002 | | | | | | |
| %RSD: | 0.247 | 0.247 | 0.25 | | | | | | |

Sequence No.: 94
Sample ID: K1008862-017
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 2:59:51 PM
Data Type: Original

Replicate Data: K1008862-017

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.553 | 1.553 | 0.037 | 0.158 | 0.043 | | | 15:00:03 | Yes |
| 2 | 1.617 | 1.617 | 0.038 | 0.173 | 0.044 | | | 15:00:38 | Yes |
| 3 | 1.495 | 1.495 | 0.036 | 0.160 | 0.041 | | | 15:01:14 | Yes |
| Mean: | 1.555 | 1.555 | 0.037 | | | | | | |
| SD: | 0.061 | 0.061 | 0.0015 | | | | | | |
| %RSD: | 3.944 | 3.944 | 3.94 | | | | | | |

Sequence No.: 95
Sample ID: K1008862-017A
Analyst:

Autosampler Location:
Date Collected: 9/24/2010 3:01:53 PM
Data Type: Original

Replicate Data: K1008862-017A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.342 | 4.342 | 0.103 | 0.424 | 0.109 | | | 15:02:04 | Yes |
| 2 | 4.365 | 4.365 | 0.104 | 0.428 | 0.110 | | | 15:02:39 | Yes |
| 3 | 4.430 | 4.430 | 0.105 | 0.428 | 0.111 | | | 15:03:15 | Yes |
| Mean: | 4.379 | 4.379 | 0.104 | | | | | | |
| SD: | 0.046 | 0.046 | 0.0011 | | | | | | |
| %RSD: | 1.045 | 1.045 | 1.04 | | | | | | |

Sequence No.: 96
Sample ID: K1008862-019

Autosampler Location:
Date Collected: 9/24/2010 3:03:55 PM

Analyst: Data Type: Original

Replicate Data: K1008862-019

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.506 | 1.506 | 0.036 | 0.154 | 0.042 | | | 15:04:07 | Yes |
| 2 | 1.477 | 1.477 | 0.035 | 0.161 | 0.041 | | | 15:04:42 | Yes |
| 3 | 1.492 | 1.492 | 0.035 | 0.156 | 0.041 | | | 15:05:18 | Yes |
| Mean: | 1.492 | 1.492 | 0.035 | | | | | | |
| SD: | 0.015 | 0.015 | 0.0004 | | | | | | |
| %RSD: | 0.995 | 0.995 | 1.00 | | | | | | |

Sequence No.: 97 Autosampler Location:
Sample ID: K1008862-019A Date Collected: 9/24/2010 3:05:57 PM
Analyst: Data Type: Original

Replicate Data: K1008862-019A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.405 | 4.405 | 0.105 | 0.429 | 0.110 | | | 15:06:08 | Yes |
| 2 | 4.430 | 4.430 | 0.105 | 0.431 | 0.111 | | | 15:06:44 | Yes |
| 3 | 4.495 | 4.495 | 0.107 | 0.433 | 0.113 | | | 15:07:19 | Yes |
| Mean: | 4.444 | 4.444 | 0.106 | | | | | | |
| SD: | 0.047 | 0.047 | 0.0011 | | | | | | |
| %RSD: | 1.050 | 1.050 | 1.05 | | | | | | |

Sequence No.: 98 Autosampler Location:
Sample ID: CCV Date Collected: 9/24/2010 3:08:08 PM
Analyst: Data Type: Original

Replicate Data: CCV

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.053 | 7.053 | 0.168 | 0.682 | 0.173 | | | 15:08:19 | Yes |
| 2 | 7.101 | 7.101 | 0.169 | 0.698 | 0.175 | | | 15:08:55 | Yes |
| 3 | 7.275 | 7.275 | 0.173 | 0.689 | 0.179 | | | 15:09:31 | Yes |
| Mean: | 7.143 | 7.143 | 0.170 | | | | | | |
| SD: | 0.117 | 0.117 | 0.0028 | | | | | | |
| %RSD: | 1.640 | 1.640 | 1.64 | | | | | | |

Sequence No.: 99 Autosampler Location:
Sample ID: CCB Date Collected: 9/24/2010 3:17:46 PM
Analyst: Data Type: Original

Replicate Data: CCB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.131 | 0.131 | 0.003 | 0.035 | 0.009 | | | 15:17:58 | Yes |
| 2 | 0.077 | 0.077 | 0.002 | 0.026 | 0.008 | | | 15:18:33 | Yes |
| 3 | 0.033 | 0.033 | 0.001 | 0.014 | 0.007 | | | 15:19:09 | Yes |
| Mean: | 0.080 | 0.080 | 0.002 | | | | | | |
| SD: | 0.049 | 0.049 | 0.0012 | | | | | | |
| %RSD: | 60.93 | 60.93 | 60.93 | | | | | | |

Sequence No.: 100 Autosampler Location:
Sample ID: K1008862-020 Date Collected: 9/24/2010 3:19:56 PM
Analyst: Data Type: Original

**Replicate Data: K1008862-020**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.748 | 0.748 | 0.018 | 0.100 | 0.024 | | | 15:20:07 | Yes |
| 2 | 0.763 | 0.763 | 0.018 | 0.099 | 0.024 | | | 15:20:43 | Yes |
| 3 | 0.774 | 0.774 | 0.018 | 0.089 | 0.024 | | | 15:21:19 | Yes |
| Mean: | 0.762 | 0.762 | 0.018 | | | | | | |
| SD: | 0.013 | 0.013 | 0.0003 | | | | | | |
| %RSD: | 1.725 | 1.725 | 1.72 | | | | | | |

==========

**Sequence No.: 101**
**Sample ID: K1008862-020A1**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 3:22:00 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-020A1**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.871 | 1.871 | 0.044 | 0.203 | 0.050 | | | 15:22:12 | Yes |
| 2 | 1.894 | 1.894 | 0.045 | 0.196 | 0.051 | | | 15:22:47 | Yes |
| 3 | 1.915 | 1.915 | 0.046 | 0.204 | 0.051 | | | 15:23:23 | Yes |
| Mean: | 1.893 | 1.893 | 0.045 | | | | | | |
| SD: | 0.022 | 0.022 | 0.0005 | | | | | | |
| %RSD: | 1.166 | 1.166 | 1.17 | | | | | | |

==========

**Sequence No.: 102**
**Sample ID: K1008862-020A2**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 3:24:05 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-020A2**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.187 | 3.187 | 0.076 | 0.329 | 0.082 | | | 15:24:17 | Yes |
| 2 | 3.082 | 3.082 | 0.073 | 0.314 | 0.079 | | | 15:24:52 | Yes |
| 3 | 3.172 | 3.172 | 0.075 | 0.321 | 0.081 | | | 15:25:28 | Yes |
| Mean: | 3.147 | 3.147 | 0.075 | | | | | | |
| SD: | 0.057 | 0.057 | 0.0013 | | | | | | |
| %RSD: | 1.801 | 1.801 | 1.80 | | | | | | |

==========

**Sequence No.: 103**
**Sample ID: K1008862-020A3**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 3:26:29 PM**
**Data Type: Original**

---

**Replicate Data: K1008862-020A3**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.562 | 4.562 | 0.108 | 0.454 | 0.114 | | | 15:26:41 | Yes |
| 2 | 4.498 | 4.498 | 0.107 | 0.450 | 0.113 | | | 15:27:17 | Yes |
| 3 | 4.677 | 4.677 | 0.111 | 0.458 | 0.117 | | | 15:27:53 | Yes |
| Mean: | 4.579 | 4.579 | 0.109 | | | | | | |
| SD: | 0.091 | 0.091 | 0.0022 | | | | | | |
| %RSD: | 1.985 | 1.985 | 1.98 | | | | | | |

==========

**Sequence No.: 104**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 3:28:51 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 7.058 | 7.058 | 0.168 | 0.701 | 0.174 | | 15:29:02 | Yes |
| 2 | 7.178 | 7.178 | 0.171 | 0.708 | 0.176 | | 15:29:38 | Yes |
| 3 | 7.272 | 7.272 | 0.173 | 0.704 | 0.179 | | 15:30:14 | Yes |
| Mean: | 7.169 | 7.169 | 0.170 | | | | | |
| SD: | 0.107 | 0.107 | 0.0025 | | | | | |
| %RSD: | 1.496 | 1.496 | 1.50 | | | | | |

**Sequence No.: 105**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location:**
**Date Collected: 9/24/2010 3:30:58 PM**
**Data Type: Original**

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.112 | 0.112 | 0.003 | 0.040 | 0.008 | | | 15:31:10 | Yes |
| 2 | 0.103 | 0.103 | 0.002 | 0.038 | 0.008 | | | 15:31:45 | Yes |
| 3 | 0.048 | 0.048 | 0.001 | 0.031 | 0.007 | | | 15:32:21 | Yes |
| Mean: | 0.088 | 0.088 | 0.002 | | | | | | |
| SD: | 0.035 | 0.035 | 0.0008 | | | | | | |
| %RSD: | 39.76 | 39.76 | 39.76 | | | | | | |

Service Request # K1008857
Instrument ID# K-ICP-AES-03

# ICP-OES Data Review Form

| | Yes | No |
|---|---|---|
| 1. Standardization completed | ✓ | |
| 2. ICV within 10 % of true value | ✓ | |
| 3. ICB below MRL | ✓ | |
| 4. CRI standard analyzed. | ✓ | |
| 5. ICS standards within 20% of true value | ✓ | |
| 6. All preceding CCVs within 10 % of true value | ✓ | |
| 7. Following CCV within 10 % of true value | ✓ | |
| 8. Bracketing CCBs below MRL | ✓ | |
| 9. Method Blank below MRL | ✓ | |
| 10. MS-MSD or Dup-MS and LCS within CAS control limits | ✗* | ✓ |
| 11. All analytes within instrument linear range | ✓ | |
| 12. Adequate rinse out time allowed between samples to eliminate memory effect | ✓ | |

Comments:
StarLIMS Run # 215646 Saved under 090710AICP03
Do not report LL Ba, B, Sr NR Ca, Al, Mg after CCB5
NR K, Na after CCB6 NR Cu2247

Ca, Mg, 4x spike level
Report Ca3158, Mg2552, Zn2062, Al3944.
* K MS = 152%, Ti = 9%. [illegible] 9/8/10 Sample is silt/sand.

Primary Review by WS Date 9/8/10

Secondary Review by [illegible] Date 9/8/10

Sample Name: BLK Acquired: 9/7/2010 13:54:40 Type: Cal
Method: 2010C(v32) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0003** | **-83.68** | **8.781** | **4.236** | **.0132** | **1.7977** | **445.5** |
| Stddev | .0000 | 2.28 | .018 | .645 | .0126 | 5.2266 | 3.0 |
| %RSD | 5.028 | 2.729 | .2006 | 15.23 | 95.73 | 290.75 | .6676 |
| #1 | .0003 | -82.07 | 8.793 | 4.692 | .0221 | -1.8981 | 443.4 |
| #2 | .0003 | -85.30 | 8.768 | 3.780 | .0042 | 5.4934 | 447.6 |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.0004** | **-.0002** | **.0058** | **.0838** | **.0000** | **.0008** | **-.0028** |
| Stddev | .0005 | .0000 | .0021 | .0040 | .0001 | .0003 | .0005 |
| %RSD | 142.2 | 17.93 | 36.59 | 4.779 | 497.8 | 41.81 | 16.65 |
| #1 | -.0007 | -.0002 | .0043 | .0866 | -.0001 | .0011 | -.0031 |
| #2 | .0000 | -.0002 | .0073 | .0810 | .0001 | .0006 | -.0025 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5.967** | **.0000** | **-.0014** | **.0004** | **.0119** | **.9250** | **.0003** |
| Stddev | 21.01 | .0010 | .0015 | .0022 | .0004 | 2.934 | .0001 |
| %RSD | 352.1 | 27090. | 109.1 | 504.0 | 3.528 | 317.2 | 15.49 |
| #1 | -8.891 | .0007 | -.0003 | .0020 | .0117 | -1.150 | .0003 |
| #2 | 20.83 | -.0007 | -.0025 | -.0011 | .0122 | 3.000 | .0004 |

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.0001** | **.0002** | **.0011** | **102.5** | **.1407** | **-23.17** | **-199.8** |
| Stddev | .0000 | .0002 | .0000 | 26.0 | .1424 | 7.41 | 38.2 |
| %RSD | 8.340 | 119.7 | 2.503 | 25.35 | 101.2 | 31.99 | 19.13 |
| #1 | -.0001 | .0000 | .0011 | 120.9 | .0400 | -17.93 | -172.8 |
| #2 | -.0001 | .0003 | .0010 | 84.15 | .2413 | -28.42 | -226.8 |

Sample Name: BLK Acquired: 9/7/2010 13:54:40 Type: Cal
Method: 2010C(v32) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0004** | **.0007** | **.0021** | **17.71** | **5.626** | **3.264** | **.0021** |
| Stddev | .0006 | .0002 | .0005 | .82 | .197 | 2.636 | .0002 |
| %RSD | 143.9 | 27.50 | 22.00 | 4.645 | 3.505 | 80.76 | 7.632 |
| #1 | .0000 | .0008 | .0024 | 17.13 | 5.765 | 1.400 | .0022 |
| #2 | .0008 | .0005 | .0018 | 18.29 | 5.486 | 5.127 | .0020 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **-.0021** | **-49.98** | **-.00754** |
| Stddev | .0014 | 37.94 | .00192 |
| %RSD | 65.51 | 75.91 | 25.497 |
| #1 | -.0011 | -23.15 | -.00618 |
| #2 | -.0031 | -76.80 | -.00890 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5155.4 | 106020. | 3827.1 | 1169.7 |
| Stddev | 8.3 | 74. | 19.6 | 2.4 |
| %RSD | .16113 | .06943 | .51318 | .20937 |
| #1 | 5161.3 | 105960. | 3841.0 | 1171.4 |
| #2 | 5149.6 | 106070. | 3813.2 | 1167.9 |

WS 9/8/10
[illegible] 9/8/10

Sample Name: STD A  Acquired: 9/7/2010 13:57:40  Type: Cal
Method: 2010C(v32)  Mode: IR  Corr. Factor: 1.000000
User: admin  :  :  :
Comment: ICP7-74-B

| Elem | Al1670 | Sb2068 | Be2348 | B_2496 | Cd2144 | Cd2265 | Ca3933 | Cr2677 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.3332** | **404.2** | **54283.** | **4451.** | **12.85** | **1.936** | **11.80** | **.0927** |
| Stddev | .0005 | 1.4 | 524. | 20. | .03 | .003 | .02 | .0001 |
| %RSD | .1499 | .3433 | .96557 | .4394 | .2348 | .1586 | .2086 | .1225 |
| #1 | .3335 | 403.2 | 53913. | 4437. | 12.82 | 1.934 | 11.82 | .0926 |
| #2 | .3328 | 405.2 | 54654. | 4465. | 12.87 | 1.939 | 11.78 | .0928 |

| Elem | Co2307 | Cu2247 | Cu3273 | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.3953** | **1.833** | **11610.** | **.5845** | **6.359** | **.5601** | **.5740** | **.6577** |
| Stddev | .0005 | .005 | 9. | .0054 | .025 | .0023 | .0004 | .0001 |
| %RSD | .1147 | .2688 | .0786 | .9246 | .3934 | .4154 | .0716 | .0105 |
| #1 | .3950 | 1.830 | 11610. | .5807 | 6.376 | .5585 | .5737 | .6578 |
| #2 | .3956 | 1.837 | 11620. | .5883 | 6.341 | .5618 | .5743 | .6577 |

| Elem | Se1960 | Ag3280 | Sn1899 | V_2924 | Zn2062 | Zn2138 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **310.8** | **12280.** | **.6204** | **.1198** | **2.111** | **10050.** | **.4380** | **.2249** |
| Stddev | 2.5 | 22. | .0043 | .0003 | .017 | 24. | .0012 | .0009 |
| %RSD | .8149 | .1819 | .6923 | .2351 | .7988 | .2378 | .2711 | .4116 |
| #1 | 309.0 | 12260. | .6174 | .1196 | 2.099 | 10040. | .4371 | .2242 |
| #2 | 312.6 | 12290. | .6235 | .1200 | 2.123 | 10070. | .4388 | .2255 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5152.3 | 105720. | 3781.8 | 1175.2 |
| Stddev | 7.0 | 67. | 42.8 | 2.8 |
| %RSD | .13530 | .06376 | 1.1307 | .23562 |
| #1 | 5147.4 | 105670. | 3751.6 | 1177.2 |
| #2 | 5157.2 | 105770. | 3812.0 | 1173.3 |

Sample Name: STD B Acquired: 9/7/2010 14:00:27 Type: Cal
Method: 2010C(v32) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-93-B

| Elem | Al3944 | As1890 | Ba4554 | Ca3158 | Fe2599 | Mg2790 | Mg2852 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **81120.** | **1076.** | **81.73** | **3.595** | **4.498** | **.9210** | R **47790.** |
| Stddev | 393. | 1. | .68 | .004 | .033 | .0030 | 236. |
| %RSD | .4848 | .1019 | .8320 | .1121 | .7382 | .3252 | .4945 |
| #1 | 80840. | 1077. | 82.21 | 3.598 | 4.521 | .9231 | 47620. |
| #2 | 81400. | 1075. | 81.25 | 3.592 | 4.475 | .9189 | 47950. |

| Elem | Mn2605 | K_7664 | Na5895 | P_2149 | Si2516 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0375** | **5045.** | **18570.** | **11700.** | **2669.** | **14310.** | **22.176** |
| Stddev | .0002 | 54. | 12. | 7. | 8. | 70. | .033 |
| %RSD | .5620 | 1.065 | .0649 | .0610 | .3110 | .4921 | .14901 |
| #1 | .0376 | 5007. | 18560. | 11700. | 2675. | 14260. | 22.200 |
| #2 | .0373 | 5083. | 18580. | 11690. | 2663. | 14360. | 22.153 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5104.1 | 104060. | 3727.8 | 1152.5 |
| Stddev | 6.0 | 381. | 26.8 | 3.8 |
| %RSD | .11683 | .36642 | .71851 | .32882 |
| #1 | 5108.4 | 103790. | 3708.8 | 1155.2 |
| #2 | 5099.9 | 104330. | 3746.7 | 1149.8 |

Sample Name: ICV1 Acquired: 9/7/2010 14:03:54 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-92-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.245** | **5.051** | **2.452** | **2.552** | **5.092** | **.12590** | **-.0048** | **1.260** |
| Stddev | .012 | .023 | .013 | .009 | .012 | .00052 | .0000 | .000 |
| %RSD | .2833 | .4511 | .5263 | .3599 | .2303 | .41024 | .7305 | .0275 |
| #1 | 4.236 | 5.035 | 2.443 | 2.545 | 5.101 | .12553 | -.0048 | 1.261 |
| #2 | 4.253 | 5.067 | 2.461 | 2.558 | 5.084 | .12627 | -.0047 | 1.260 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.243** | **12.65** | **12.23** | **.5030** | **1.232** | **.6315** | **.6272** | **2.547** |
| Stddev | .007 | .03 | .29 | .0005 | .007 | .0003 | .0033 | .024 |
| %RSD | .5520 | .2275 | 2.387 | .0949 | .5332 | .0512 | .5261 | .9479 |
| #1 | 1.238 | 12.67 | 12.44 | .5034 | 1.228 | .6317 | .6249 | 2.564 |
| #2 | 1.248 | 12.63 | 12.02 | .5027 | 1.237 | .6312 | .6296 | 2.530 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.476** | **12.63** | **12.39** | **12.73** | **1.248** | **1.278** | **1.977** | **1.228** |
| Stddev | .012 | .06 | .04 | .05 | .001 | .010 | .011 | .009 |
| %RSD | .5025 | .4433 | .3394 | .3826 | .0709 | .7638 | .5296 | .6893 |
| #1 | 2.467 | 12.67 | 12.42 | 12.70 | 1.248 | 1.271 | 1.970 | 1.222 |
| #2 | 2.485 | 12.59 | 12.36 | 12.77 | 1.249 | 1.285 | 1.985 | 1.234 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICV1 Acquired: 9/7/2010 14:03:54 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-92-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.56** | **2.475** | **.6346** | **12.54** | **.0017** | **1.262** | **1.227** | **1.224** |
| Stddev | .06 | .012 | .0022 | .01 | .0004 | .002 | .006 | .004 |
| %RSD | .4883 | .4732 | .3432 | .0533 | 25.56 | .1608 | .5291 | .3598 |
| #1 | 12.52 | 2.467 | .6331 | 12.55 | .0014 | 1.261 | 1.222 | 1.221 |
| #2 | 12.61 | 2.483 | .6362 | 12.54 | .0020 | 1.264 | 1.231 | 1.227 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0071** | **.0154** | **2.027** | **2.502** | **.0014** | **.00078** |
| Stddev | .0043 | .0018 | .004 | .001 | .0014 | .00012 |
| %RSD | 59.67 | 11.94 | .1749 | .0486 | 102.1 | 14.845 |
| #1 | -.0102 | .0167 | 2.025 | 2.501 | .0024 | .00086 |
| #2 | -.0041 | .0141 | 2.030 | 2.503 | .0004 | .00070 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5069.1 | 104130. | 3730.7 | 1153.0 |
| Stddev | 5.9 | 307. | 34.8 | .6 |
| %RSD | .11689 | .29523 | .93212 | .05302 |
| #1 | 5073.3 | 103910. | 3706.1 | 1152.5 |
| #2 | 5065.0 | 104340. | 3755.3 | 1153.4 |

Sample Name: ICVB1 Acquired: 9/7/2010 14:07:00 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-81-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9776** | **1.020** | **.0036** | **.0034** | **-.0001** | **.00005** | **1.958** | **-.0002** |
| Stddev | .0040 | .001 | .0014 | .0013 | .0008 | .00006 | .003 | .0001 |
| %RSD | .4108 | .1357 | 38.24 | 37.68 | 641.0 | 113.47 | .1576 | 65.74 |
| #1 | .9748 | 1.021 | .0045 | .0043 | .0005 | .00009 | 1.956 | -.0002 |
| #2 | .9805 | 1.019 | .0026 | .0025 | -.0007 | .00001 | 1.961 | -.0001 |
| Check ? | Chk Pass | None | None | None | None | None | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **5.053** | **4.919** | **.0032** | **-.0001** | **.0110** | **.0005** | **9.919** |
| Stddev | .0001 | .019 | .030 | .0010 | .0002 | .0008 | .0006 | .013 |
| %RSD | 14.97 | .3680 | .6053 | 33.02 | 213.9 | 7.212 | 118.0 | .1273 |
| #1 | .0005 | 5.066 | 4.940 | .0039 | .0001 | .0115 | .0001 | 9.928 |
| #2 | .0006 | 5.040 | 4.898 | .0024 | -.0003 | .0104 | .0009 | 9.910 |
| Check ? | None | None | Chk Pass | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0010** | **4.929** | **4.964** | **5.076** | **9.239** | **9.797** | **.0006** | **.0052** |
| Stddev | .0003 | .005 | .014 | .010 | .002 | .048 | .0003 | .0006 |
| %RSD | 30.14 | .1111 | .2750 | .1912 | .0248 | .4852 | 49.77 | 10.73 |
| #1 | .0013 | 4.925 | 4.974 | 5.069 | 9.237 | 9.763 | .0009 | .0048 |
| #2 | .0008 | 4.933 | 4.954 | 5.083 | 9.241 | 9.830 | .0004 | .0056 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICVB1 Acquired: 9/7/2010 14:07:00 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-81-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0342 | -.0012 | .0022 | 8.034 | 4.904 | .0225 | .0001 | .0001 |
| Stddev | .0916 | .0001 | .0001 | .019 | .002 | .0003 | .0001 | .0001 |
| %RSD | 267.8 | 7.583 | 4.834 | .2410 | .0356 | 1.404 | 101.3 | 55.11 |
| #1 | .0306 | -.0011 | .0023 | 8.021 | 4.903 | .0222 | .0000 | .0002 |
| #2 | -.0989 | -.0012 | .0021 | 8.048 | 4.905 | .0227 | .0001 | .0001 |
| Check ? | None | None | None | None | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.047 | 5.111 | .0005 | -.0258 | 2.062 | 2.0857 |
| Stddev | .018 | .027 | .0000 | .0010 | .013 | .0025 |
| %RSD | .3461 | .5344 | .4857 | 3.938 | .6413 | .11904 |
| #1 | 5.034 | 5.091 | .0005 | -.0265 | 2.053 | 2.0875 |
| #2 | 5.059 | 5.130 | .0005 | -.0251 | 2.072 | 2.0840 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5120.4 | 105030. | 3744.7 | 1162.6 |
| Stddev | 5.7 | 152. | 18.9 | 1.9 |
| %RSD | .11167 | .14444 | .50500 | .16634 |
| #1 | 5124.5 | 105140. | 3731.3 | 1161.2 |
| #2 | 5116.4 | 104920. | 3758.1 | 1163.9 |

Sample Name: ICB Acquired: 9/7/2010 14:10:57 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0043** | **-.0002** | **.0028** | F **-.0026** | **.00000** | **-.0039** | **.0000** |
| Stddev | .0000 | .0022 | .0012 | .0017 | .0006 | .00002 | .0002 | .0000 |
| %RSD | 47.08 | 52.47 | 587.4 | 58.82 | 22.18 | 837.35 | 5.199 | 83.26 |
| #1 | .0001 | .0027 | .0006 | .0016 | -.0030 | -.00001 | -.0041 | .0000 |
| #2 | .0001 | .0058 | -.0010 | .0040 | -.0022 | .00001 | -.0038 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | .0020 | | | |
| Low Limit | | | | | -.0020 | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0122** | **-.0008** | **.0001** | **-.0001** | **.0002** | **.0000** | **.0070** |
| Stddev | .0002 | .0036 | .0001 | .0005 | .0004 | .0005 | .001 | .0078 |
| %RSD | 292.0 | 29.70 | 13.12 | 985.6 | 478.6 | 232.2 | 7477. | 111.4 |
| #1 | -.0002 | -.0096 | -.0007 | -.0003 | .0002 | .0006 | .0006 | .0124 |
| #2 | .0001 | -.0147 | -.0009 | .0004 | -.0004 | -.0001 | -.0006 | .0015 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0007** | **-.0001** | **-.0010** | **.0001** | **-.0013** | **.0001** | **.0000** |
| Stddev | .0000 | .0121 | .0001 | .0011 | .0000 | .0021 | .0002 | .0002 |
| %RSD | 22.66 | 1639. | 54.49 | 109.0 | 8.456 | 160.9 | 121.8 | 344.4 |
| #1 | .0001 | -.0078 | -.0001 | -.0019 | .0001 | -.0028 | .0000 | -.0001 |
| #2 | .0002 | .0093 | -.0002 | -.0002 | .0001 | .0002 | .0002 | .0002 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: ICB Acquired: 9/7/2010 14:10:57 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0795** | **.0005** | **.0006** | **.0363** | **.0008** | **-.0002** | **-.0002** | **-.0002** |
| Stddev | .0471 | .0004 | .0000 | .0046 | .0003 | .0002 | .0002 | .0001 |
| %RSD | 59.20 | 79.92 | 3.133 | 12.75 | 34.63 | 90.01 | 122.2 | 27.89 |
| #1 | -.1128 | .0002 | .0006 | .0395 | .0010 | -.0003 | -.0003 | -.0003 |
| #2 | -.0462 | .0007 | .0006 | .0330 | .0006 | -.0001 | .0000 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0019** | **.0131** | **-.0001** | **.0010** | **.0011** | **.00017** |
| Stddev | .0033 | .0092 | .0002 | .0007 | .0010 | .00004 |
| %RSD | 179.2 | 70.24 | 182.7 | 69.85 | 84.42 | 24.451 |
| #1 | -.0005 | .0066 | .0000 | .0015 | .0005 | .00020 |
| #2 | .0042 | .0196 | -.0002 | .0005 | .0018 | .00014 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5156.6 | 106010. | 3838.3 | 1162.2 |
| Stddev | 13.6 | 213. | 51.7 | .2 |
| %RSD | .26337 | .20070 | 1.3478 | .01478 |
| #1 | 5166.2 | 105860. | 3801.8 | 1162.3 |
| #2 | 5147.0 | 106160. | 3874.9 | 1162.1 |

Sample Name: ICB Acquired: 9/7/2010 14:15:23 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: rerun

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | **-.0022** | **-.0015** | **.0029** | F **-.0029** | **-.00003** | **-.0069** | **.0001** |
| Stddev | .0012 | .0017 | .0021 | .0000 | .0016 | .00002 | .0010 | .0001 |
| %RSD | 137.6 | 78.44 | 141.6 | .3016 | 53.95 | 51.101 | 14.74 | 91.46 |
| #1 | .0000 | -.0010 | -.0030 | .0029 | -.0040 | -.00002 | -.0076 | .0000 |
| #2 | .0017 | -.0034 | .0000 | .0029 | -.0018 | -.00004 | -.0062 | .0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | .0020 | | | |
| Low Limit | | | | | -.0020 | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0036** | **-.0009** | **-.0001** | **-.0002** | **.0002** | **.0010** | **.0005** |
| Stddev | .0001 | .0028 | .0001 | .0002 | .0001 | .0001 | .0001 | .0038 |
| %RSD | 84.82 | 76.32 | 11.33 | 205.7 | 70.24 | 61.88 | 10.23 | 790.3 |
| #1 | .0002 | -.0056 | -.0009 | -.0002 | -.0003 | .0003 | .0011 | -.0022 |
| #2 | .0000 | -.0017 | -.0008 | .0000 | -.0001 | .0001 | .0010 | .0032 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **-.0055** | **-.0001** | **.0000** | **.0000** | **.0004** | **.0000** | **.0002** |
| Stddev | .0009 | .0161 | .0001 | .002 | .000 | .0004 | .000 | .0004 |
| %RSD | 258.4 | 290.8 | 115.1 | 4119. | 49.52 | 123.3 | 1974. | 210.3 |
| #1 | -.0009 | .0058 | .0000 | -.0013 | .0000 | .0000 | -.0002 | .0005 |
| #2 | .0003 | -.0169 | -.0002 | .0012 | -.0001 | .0007 | .0001 | -.0001 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

[illegible] 9/8/10

Sample Name: ICB Acquired: 9/7/2010 14:15:23 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0189** | **.0015** | **.0001** | **.0135** | **.0005** | **.0000** | **.0000** | **-.0003** |
| Stddev | .0271 | .0005 | .0007 | .0087 | .0001 | .000 | .0000 | .0000 |
| %RSD | 143.5 | 32.27 | 658.9 | 64.27 | 23.00 | 3993. | 114.4 | 15.60 |
| #1 | .0003 | .0018 | .0006 | .0197 | .0004 | .0002 | .0000 | -.0003 |
| #2 | -.0381 | .0012 | -.0004 | .0074 | .0006 | -.0002 | .0000 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0154** | **.0314** | **-.0002** | **.0017** | **-.0005** | **.00020** |
| Stddev | .0235 | .0149 | .0000 | .0022 | .0001 | .00031 |
| %RSD | 152.5 | 47.48 | 4.219 | 131.9 | 17.94 | 152.95 |
| #1 | -.0012 | .0419 | -.0002 | .0001 | -.0005 | .00042 |
| #2 | .0320 | .0208 | -.0002 | .0032 | -.0004 | -.00002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5196.5 | 106690. | 3919.0 | 1167.5 |
| Stddev | 10.0 | 201. | 12.9 | .4 |
| %RSD | .19159 | .18812 | .32872 | .03684 |
| #1 | 5189.5 | 106840. | 3909.9 | 1167.2 |
| #2 | 5203.6 | 106550. | 3928.1 | 1167.8 |

[illegible] 9/8/10

Sample Name: CCVA1 Acquired: 9/7/2010 14:18:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2484** | **.2493** | **.2493** | **.2588** | **.2480** | **.24678** | **.2435** | **.2455** |
| Stddev | .0016 | .0050 | .0036 | .0016 | .0025 | .00174 | .0015 | .0012 |
| %RSD | .6561 | 2.009 | 1.439 | .6331 | 1.016 | .70542 | .6181 | .4771 |
| #1 | .2460 | .2433 | .2445 | .2573 | .2517 | .24747 | .2425 | .2441 |
| #2 | .2489 | .2486 | .2508 | .2576 | .2461 | .24585 | .2431 | .2457 |
| #3 | .2494 | .2556 | .2491 | .2607 | .2466 | .24493 | .2429 | .2453 |
| #4 | .2494 | .2495 | .2529 | .2596 | .2478 | .24886 | .2458 | .2469 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2488** | **.2353** | **.2452** | **.2475** | **.2491** | **.2448** | **.2490** | **.2512** |
| Stddev | .0009 | .0066 | .0011 | .0009 | .0012 | .0015 | .0014 | .0078 |
| %RSD | .3608 | 2.785 | .4601 | .3521 | .4850 | .6310 | .5735 | 3.124 |
| #1 | .2476 | .2424 | .2456 | .2484 | .2473 | .2430 | .2502 | .2535 |
| #2 | .2490 | .2392 | .2449 | .2474 | .2494 | .2442 | .2472 | .2440 |
| #3 | .2498 | .2288 | .2439 | .2479 | .2501 | .2454 | .2486 | .2612 |
| #4 | .2490 | .2307 | .2466 | .2464 | .2494 | .2465 | .2501 | .2460 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/7/2010 14:18:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2483** | **.2425** | **.2461** | **.2597** | **.2442** | **.2490** | **.2466** | **.2499** |
| Stddev | .0016 | .0259 | .0015 | .0025 | .0007 | .0018 | .0011 | .0016 |
| %RSD | .6340 | 10.68 | .5988 | .9705 | .3015 | .7366 | .4610 | .6327 |
| #1 | .2460 | .2572 | .2464 | .2626 | .2443 | .2474 | .2450 | .2480 |
| #2 | .2489 | .2072 | .2465 | .2590 | .2439 | .2516 | .2466 | .2492 |
| #3 | .2486 | .2399 | .2439 | .2606 | .2434 | .2482 | .2474 | .2509 |
| #4 | .2495 | .2658 | .2473 | .2566 | .2451 | .2486 | .2473 | .2515 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.560** | **.2518** | **.2507** | **.2933** | **.2476** | **.2461** | **.2509** | **.2502** |
| Stddev | .040 | .0019 | .0012 | .0174 | .0016 | .0007 | .0006 | .0008 |
| %RSD | 1.564 | .7485 | .4683 | 5.925 | .6558 | .2756 | .2504 | .3177 |
| #1 | 2.529 | .2515 | .2507 | .2937 | .2457 | .2463 | .2503 | .2496 |
| #2 | 2.615 | .2494 | .2496 | .2719 | .2475 | .2467 | .2504 | .2498 |
| #3 | 2.531 | .2522 | .2502 | .2932 | .2475 | .2451 | .2514 | .2502 |
| #4 | 2.567 | .2540 | .2523 | .3144 | .2497 | .2463 | .2514 | .2514 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/7/2010 14:18:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0026** | **.1597** | **.2454** | **.2488** | **-.0006** | **.00015** |
| Stddev | .0024 | .0184 | .0004 | .0029 | .0014 | .00021 |
| %RSD | 93.60 | 11.50 | .1563 | 1.178 | 228.1 | 141.03 |
| | | | | | | |
| #1 | -.0035 | .1436 | .2452 | .2494 | .0002 | .00013 |
| #2 | -.0008 | .1445 | .2460 | .2447 | .0008 | .00007 |
| #3 | -.0004 | .1796 | .2453 | .2492 | -.0023 | .00044 |
| #4 | -.0056 | .1710 | .2452 | .2517 | -.0011 | -.00005 |
| | | | | | | |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5221.0 | 107010. | 3830.9 | 1183.9 |
| Stddev | 9.8 | 321. | 17.4 | 2.2 |
| %RSD | .18777 | .29976 | .45435 | .18247 |
| | | | | |
| #1 | 5233.2 | 107110. | 3824.4 | 1187.0 |
| #2 | 5211.5 | 107100. | 3826.4 | 1181.9 |
| #3 | 5214.8 | 106550. | 3856.2 | 1183.3 |
| #4 | 5224.4 | 107280. | 3816.5 | 1183.5 |

Sample Name: CCVB1 Acquired: 9/7/2010 14:22:49 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.109** | **9.974** | **.0004** | **1.019** | **10.02** | **-.00002** | **-.0006** | **-.0002** |
| Stddev | .019 | .046 | .0025 | .002 | .05 | .00001 | .0010 | .0000 |
| %RSD | .2634 | .4586 | 576.2 | .2264 | .4614 | 53.377 | 170.4 | 17.85 |
| #1 | 7.108 | 9.949 | -.0018 | 1.017 | 10.02 | -.00002 | -.0008 | -.0002 |
| #2 | 7.091 | 9.949 | -.0016 | 1.021 | 10.08 | -.00001 | -.0005 | -.0001 |
| #3 | 7.102 | 9.955 | .0029 | 1.018 | 9.964 | -.00001 | -.0017 | -.0002 |
| #4 | 7.135 | 10.04 | .0022 | 1.021 | 10.00 | -.00003 | .0007 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **10.01** | **9.733** | **.0001** | **-.0004** | **.0113** | **-.0001** | **10.04** |
| Stddev | .0000 | .02 | .075 | .0004 | .0006 | .0004 | .0010 | .05 |
| %RSD | 5.596 | .2004 | .7697 | 722.6 | 137.4 | 3.942 | 812.9 | .4505 |
| #1 | .0006 | 10.03 | 9.719 | -.0002 | -.0001 | .0109 | -.0009 | 10.08 |
| #2 | .0006 | 10.02 | 9.811 | .0007 | .0001 | .0111 | -.0001 | 10.08 |
| #3 | .0007 | 9.985 | 9.636 | -.0001 | -.0004 | .0119 | -.0009 | 9.988 |
| #4 | .0006 | 10.00 | 9.765 | -.0002 | -.0013 | .0114 | .0013 | 10.01 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/7/2010 14:22:49 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0025** | **9.909** | **9.715** | **10.22** | **.9857** | **1.006** | **-.0002** | **.0088** |
| Stddev | .0008 | .043 | .052 | .05 | .0020 | .004 | .0002 | .0004 |
| %RSD | 31.14 | .4298 | .5389 | .4895 | .2009 | .4221 | 111.6 | 4.657 |
| #1 | .0027 | 9.963 | 9.744 | 10.20 | .9833 | 1.003 | -.0004 | .0087 |
| #2 | .0033 | 9.858 | 9.670 | 10.27 | .9849 | 1.011 | -.0001 | .0091 |
| #3 | .0024 | 9.908 | 9.774 | 10.16 | .9875 | 1.007 | -.0004 | .0083 |
| #4 | .0015 | 9.906 | 9.672 | 10.26 | .9873 | 1.002 | .0001 | .0092 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.17** | **-.0004** | **.0000** | **10.25** | **.0003** | **.0028** | **-.0005** | **-.0004** |
| Stddev | .09 | .0016 | .0003 | .01 | .0006 | .0007 | .0003 | .0001 |
| %RSD | .9169 | 384.7 | 874.6 | .1235 | 183.0 | 24.57 | 60.53 | 18.22 |
| #1 | 10.05 | .0004 | .0005 | 10.26 | -.0005 | .0033 | -.0003 | -.0004 |
| #2 | 10.23 | -.0013 | -.0002 | 10.26 | .0005 | .0033 | -.0003 | -.0003 |
| #3 | 10.25 | -.0021 | .0000 | 10.23 | .0009 | .0019 | -.0009 | -.0004 |
| #4 | 10.13 | .0013 | -.0002 | 10.26 | .0004 | .0025 | -.0004 | -.0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/7/2010 14:22:49 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.12** | **10.40** | **.0002** | **-.0019** | **1.017** | **.99227** |
| Stddev | .02 | .03 | .0003 | .0016 | .007 | .00415 |
| %RSD | .1560 | .3015 | 125.2 | 83.19 | .7012 | .41775 |
| #1 | 10.10 | 10.39 | .0000 | -.0031 | 1.014 | .99395 |
| #2 | 10.14 | 10.37 | .0000 | -.0016 | 1.025 | .99725 |
| #3 | 10.12 | 10.44 | .0003 | -.0030 | 1.008 | .98802 |
| #4 | 10.11 | 10.40 | .0006 | .0002 | 1.020 | .98985 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5179.0 | 105750. | 3817.4 | 1174.4 |
| Stddev | 6.8 | 223. | 12.3 | 3.3 |
| %RSD | .13151 | .21065 | .32283 | .28125 |
| #1 | 5179.9 | 105670. | 3801.7 | 1177.0 |
| #2 | 5182.5 | 105540. | 3818.1 | 1175.0 |
| #3 | 5184.4 | 105720. | 3818.0 | 1176.2 |
| #4 | 5169.2 | 106070. | 3831.8 | 1169.6 |

Sample Name: CCB1 Acquired: 9/7/2010 14:27:31 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0049** | **-.0001** | **.0056** | F **-.0031** | **-.00001** | **-.0042** |
| Stddev | .0001 | .0025 | .0003 | .0009 | .0003 | .00001 | .0001 |
| %RSD | 122.6 | 51.07 | 290.9 | 16.80 | 10.94 | 155.28 | 3.108 |
| #1 | .0002 | -.0031 | .0001 | .0049 | -.0029 | -.00002 | -.0041 |
| #2 | .0000 | -.0066 | -.0003 | .0063 | -.0034 | .00000 | -.0043 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass |
| High Limit | | | | | .0020 | | |
| Low Limit | | | | | -.0020 | | |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0001** | **-.0032** | **-.0003** | **.0003** | **.0003** | **.0006** |
| Stddev | .000 | .0000 | .0094 | .0002 | .0003 | .0003 | .0002 |
| %RSD | 540.3 | 25.10 | 294.2 | 45.11 | 103.0 | 124.9 | 33.68 |
| #1 | .0000 | .0001 | -.0098 | -.0002 | .0005 | .0005 | .0005 |
| #2 | .0000 | .0001 | .0034 | -.0004 | .0001 | .0000 | .0008 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0007** | **-.0004** | **.0078** | **.0003** | **.0001** | **.0002** |
| Stddev | .0003 | .0015 | .0001 | .0010 | .0000 | .0010 | .0001 |
| %RSD | 56.22 | 213.2 | 16.24 | 12.70 | 10.05 | 1327. | 36.24 |
| #1 | .0007 | .0018 | -.0004 | .0085 | .0002 | .0008 | .0003 |
| #2 | .0003 | -.0004 | -.0005 | .0071 | .0003 | -.0006 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

9/7/10

Sample Name: CCB1 Acquired: 9/7/2010 14:27:31 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0025** | **-.0002** | **.0001** | **.0629** | **.0005** | **.0000** | **.0408** |
| Stddev | .0034 | .0002 | .0003 | .0954 | .0021 | .0004 | .0003 |
| %RSD | 135.7 | 97.71 | 452.8 | 151.7 | 400.2 | 2941. | .8041 |
| #1 | -.0001 | -.0001 | -.0001 | -.0046 | .0020 | -.0003 | .0405 |
| #2 | -.0049 | -.0004 | .0003 | .1304 | -.0010 | .0003 | .0410 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0004** | **-.0001** | **-.0003** | **.0011** | **.0225** | **.0001** |
| Stddev | .0003 | .0007 | .0001 | .0000 | .0030 | .0138 | .0001 |
| %RSD | 139.2 | 171.0 | 118.2 | 13.95 | 263.8 | 61.60 | 159.1 |
| #1 | .0000 | .0009 | -.0002 | -.0003 | .0032 | .0127 | .0000 |
| #2 | .0004 | -.0001 | .0000 | -.0002 | -.0010 | .0323 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0007** | **.0019** | F **.00045** |
| Stddev | .0004 | .0002 | .00038 |
| %RSD | 59.60 | 10.39 | 83.461 |
| #1 | .0010 | .0021 | .00072 |
| #2 | .0004 | .0018 | .00019 |
| Check ? | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | .00020 |
| Low Limit | | | -.00020 |

9/8/10

Sample Name: CCB1 Acquired: 9/7/2010 14:27:31 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5169.6 | 106890. | 3867.8 | 1170.2 |
| Stddev | 7.4 | 440. | 38.2 | 2.6 |
| %RSD | .14409 | .41209 | .98639 | .22627 |
| | | | | |
| #1 | 5174.9 | 106570. | 3840.8 | 1172.1 |
| #2 | 5164.3 | 107200. | 3894.8 | 1168.4 |

9/8/10

Sample Name: CCB1 Acquired: 9/7/2010 14:30:37 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: RERUN

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0028** | **.0015** | **.0041** | F **-.0023** | **-.00001** | **-.0084** | **.0000** |
| Stddev | .0001 | .0004 | .0024 | .0001 | .0003 | .00004 | .0001 | .0000 |
| %RSD | 79.84 | 12.46 | 165.0 | 2.833 | 12.83 | 397.15 | .7164 | 27.82 |
| #1 | .0001 | -.0031 | .0032 | .0042 | -.0021 | .00002 | -.0085 | .0000 |
| #2 | .0000 | -.0026 | -.0002 | .0040 | -.0025 | -.00004 | -.0084 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | .0020 | | | |
| Low Limit | | | | | -.0020 | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0116** | **-.0004** | **.0001** | **.0000** | **.0001** | **.0002** | **-.0043** |
| Stddev | .0001 | .0017 | .0001 | .0004 | .001 | .0004 | .0000 | .0013 |
| %RSD | 61.09 | 14.79 | 34.57 | 261.5 | 1656. | 288.9 | 12.76 | 29.44 |
| #1 | .0002 | -.0128 | -.0003 | -.0001 | .0005 | .0004 | .0002 | -.0052 |
| #2 | .0001 | -.0104 | -.0005 | .0004 | -.0006 | -.0001 | .0003 | -.0034 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0065** | **.0001** | **.0003** | **.0002** | **.0001** | **-.0003** | **.0001** |
| Stddev | .0003 | .0216 | .0001 | .0017 | .0000 | .0002 | .0003 | .0000 |
| %RSD | 186.6 | 335.0 | 51.46 | 531.3 | 8.413 | 241.0 | 87.03 | 28.03 |
| #1 | .0001 | .0217 | .0001 | -.0009 | .0002 | -.0001 | -.0005 | .0001 |
| #2 | -.0004 | -.0088 | .0002 | .0015 | .0002 | .0003 | -.0001 | .0000 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB1 Acquired: 9/7/2010 14:30:37 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0542** | **.0008** | **.0001** | **.0535** | **-.0001** | **-.0001** | **-.0002** | **-.0002** |
| Stddev | .0931 | .0026 | .0008 | .0224 | .0003 | .0000 | .0002 | .0001 |
| %RSD | 171.8 | 340.5 | 1242. | 41.85 | 446.6 | 51.18 | 131.8 | 24.81 |
| #1 | .1201 | -.0011 | -.0005 | .0377 | .0001 | -.0001 | .0000 | -.0003 |
| #2 | -.0116 | .0026 | .0006 | .0694 | -.0003 | -.0001 | -.0003 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0020** | **.0318** | **.0000** | **.0008** | **.0019** | **.00017** |
| Stddev | .0001 | .0296 | .0000 | .0009 | .0041 | .00040 |
| %RSD | 3.639 | 93.24 | 168.6 | 121.0 | 222.8 | 236.99 |
| #1 | -.0021 | .0108 | .0000 | .0014 | -.0011 | -.00012 |
| #2 | -.0020 | .0527 | .0001 | .0001 | .0048 | .00046 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5168.7 | 106200. | 3733.2 | 1161.7 |
| Stddev | 1.7 | 84. | 1.6 | .1 |
| %RSD | .03297 | .07956 | .04203 | .00555 |
| #1 | 5167.4 | 106140. | 3734.3 | 1161.6 |
| #2 | 5169.9 | 106260. | 3732.1 | 1161.7 |

Sample Name: CRI Acquired: 9/7/2010 14:33:48 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-90-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0528** | **.0496** | **.0478** | **.1028** | F **.0023** | **.00472** | **.0396** | **.0053** |
| Stddev | .0002 | .0053 | .0014 | .0011 | .0003 | .00001 | .0004 | .0000 |
| %RSD | .4328 | 10.75 | 2.976 | 1.110 | 11.40 | .16847 | .9242 | .4792 |
| #1 | .0530 | .0534 | .0467 | .1020 | .0021 | .00471 | .0399 | .0053 |
| #2 | .0527 | .0459 | .0488 | .1036 | .0024 * | .00472 | .0394 | .0053 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | ~~Chk Fail~~ | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | .0050 | | | |
| Range | | | | | ~~-50.00%~~ | | | |

over MDL pass MMR 9/8/10

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0053** | **.0403** | **.0483** | **.0046** | **.0099** | **.0104** | **.0101** | **.0228** |
| Stddev | .0001 | .0020 | .0001 | .0002 | .0008 | .0003 | .0007 | .0027 |
| %RSD | 1.082 | 5.057 | .2176 | 5.035 | 8.386 | 3.136 | 7.045 | 11.76 |
| #1 | .0054 | .0389 | .0482 | .0048 | .0093 | .0106 | .0096 | .0247 |
| #2 | .0053 | .0418 | .0483 | .0044 | .0105 | .0102 | .0106 | .0209 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0486** | **.0205** | **.0199** | **.0207** | **.0048** | **.0044** | **.0094** | **.0203** |
| Stddev | .0030 | .0197 | .0001 | .0005 | .0000 | .0013 | .0003 | .0002 |
| %RSD | 6.115 | 95.99 | .2840 | 2.426 | .5710 | 30.11 | 3.624 | 1.116 |
| #1 | .0465 | .0344 | .0199 | .0203 | .0047 | .0034 | .0091 | .0205 |
| #2 | .0507 | .0066 | .0199 | .0210 | .0048 | .0053 | .0096 | .0202 |
| Check ? | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CRI Acquired: 9/7/2010 14:33:48 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-90-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.4463** | **.1011** | **.0107** | **.2273** | **.0492** | **.0099** | **.0099** | **.0098** |
| Stddev | .0399 | .0013 | .0004 | .0053 | .0005 | .0001 | .0001 | .0001 |
| %RSD | 8.937 | 1.250 | 3.348 | 2.352 | .9732 | .6863 | .9747 | .5506 |
| #1 | .4745 | .1020 | .0105 | .2311 | .0496 | .0099 | .0100 | .0098 |
| #2 | .4181 | .1003 | .0110 | .2235 | .0489 | .0098 | .0099 | .0098 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1933** | **.4016** | **.0099** | **.2010** | **.0107** | **.01003** |
| Stddev | .0028 | .0553 | .0002 | .0020 | .0016 | .00017 |
| %RSD | 1.440 | 13.78 | 1.684 | 1.016 | 14.61 | 1.7012 |
| #1 | .1914 | .3625 | .0100 | .1995 | .0096 | .01015 |
| #2 | .1953 | .4407 | .0097 | .2024 | .0118 | .00991 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5151.6 | 105870. | 3870.4 | 1166.8 |
| Stddev | 1.1 | 29. | 18.5 | 1.0 |
| %RSD | .02134 | .02780 | .47903 | .08398 |
| #1 | 5150.8 | 105850. | 3857.3 | 1167.4 |
| #2 | 5152.4 | 105890. | 3883.5 | 1166.1 |

Sample Name: LLCRI Acquired: 9/7/2010 14:36:42 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-89-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0024** | **.0026** | **.0090** | **.0110** | F **-.0012** | **.00017** | F **-.0013** |
| Stddev | .0000 | .0028 | .0023 | .0025 | .0003 | .00008 | .0007 |
| %RSD | .2270 | 107.8 | 25.94 | 22.42 | 24.14 | 45.888 | 55.42 |
| #1 | .0024 | .0006 | .0107 | .0128 | -.0014 | .00022 | -.0018 |
| #2 | .0024 | .0045 | .0074 | .0093 | -.0010 | .00011 | -.0008 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Fail |
| Value | | | | | .0020 | | .0100 |
| Range | | | | | -50.00% | | -50.00% |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0004** | **-.0015** | **.0041** | **.0022** | **.0010** | **.0026** |
| Stddev | .0000 | .0000 | .0066 | .0001 | .0004 | .0004 | .0005 |
| %RSD | 6.101 | 6.914 | 448.8 | 1.930 | 19.52 | 38.14 | 20.28 |
| #1 | .0005 | .0004 | -.0062 | .0041 | .0025 | .0013 | .0022 |
| #2 | .0006 | .0004 | .0032 | .0040 | .0019 | .0008 | .0029 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0018** | **.0134** | **.0103** | **.0221** | **.0020** | **.0011** | **.0005** |
| Stddev | .0003 | .0106 | .0001 | .0179 | .0000 | .0033 | .0000 |
| %RSD | 15.55 | 78.82 | 1.063 | 81.14 | .0953 | 307.3 | 1.713 |
| #1 | .0016 | .0209 | .0102 | .0094 | .0020 | .0034 | .0005 |
| #2 | .0020 | .0059 | .0103 | .0347 | .0020 | -.0013 | .0005 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: LLCRI Acquired: 9/7/2010 14:36:42 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-89-A

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0007** | **.0014** | **.0023** | **.0995** | **.0211** | **.0027** | **.2522** |
| Stddev | .0003 | .0003 | .0009 | .1142 | .0033 | .0006 | .0010 |
| %RSD | 40.38 | 18.73 | 37.69 | 114.8 | 15.66 | 21.08 | .3837 |
| #1 | -.0005 | .0015 | .0017 | .1802 | .0188 | .0023 | .2529 |
| #2 | -.0009 | .0012 | .0029 | .0187 | .0235 | .0031 | .2516 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0105** | **.0017** | **.0020** | **.0018** | **.0191** | **.0621** | **.0009** |
| Stddev | .0006 | .0003 | .0001 | .0000 | .0016 | .0017 | .0000 |
| %RSD | 5.924 | 16.68 | 5.545 | 1.373 | 8.424 | 2.665 | .1378 |
| #1 | .0101 | .0019 | .0019 | .0018 | .0180 | .0633 | .0009 |
| #2 | .0110 | .0015 | .0020 | .0017 | .0203 | .0610 | .0009 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0112** | **.0096** | F **.00041** |
| Stddev | .0008 | .0002 | .00013 |
| %RSD | 7.411 | 1.733 | 31.628 |
| #1 | .0106 | .0095 | .00032 |
| #2 | .0118 | .0097 | .00050 |
| Check ? | Chk Pass | Chk Pass | Chk Fail |
| Value | | | .00020 |
| Range | | | 100.00% |

WS
9/16/10

Sample Name: LLCRI Acquired: 9/7/2010 14:36:42 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-89-A

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5183.2 | 106180. | 3849.1 | 1172.8 |
| Stddev | 13.3 | 461. | 3.0 | .4 |
| %RSD | .25710 | .43422 | .07677 | .03746 |
| | | | | |
| #1 | 5173.8 | 106500. | 3847.0 | 1172.5 |
| #2 | 5192.7 | 105850. | 3851.2 | 1173.1 |

Sample Name: LLCRI Acquired: 9/7/2010 14:40:09 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-89-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0023** | **-.0012** | **.0076** | **.0104** | F **-.0005** | **.00017** | F **.0007** | **.0005** |
| Stddev | .0000 | .0035 | .0034 | .0000 | .0002 | .00001 | .0010 | .0001 |
| %RSD | .1193 | 286.2 | 44.83 | .4235 | 51.03 | 7.8338 | 144.9 | 12.14 |
| #1 | .0023 | -.0037 | .0101 | .0103 | -.0007 | .00016 | .0000 | .0006 |
| #2 | .0023 | .0012 | .0052 | .0104 | -.0003 | .00018 | .0014 | .0005 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Fail | Chk Pass |
| Value | | | | | .0020 | | .0100 | |
| Range | | | | | -50.00% | | -50.00% | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0040** | **.0042** | **.0015** | **.0009** | **.0024** | **.0017** | **.0113** |
| Stddev | .0000 | .0108 | .0001 | .0001 | .0003 | .0004 | .0003 | .0019 |
| %RSD | 9.184 | 271.7 | 3.224 | 8.828 | 37.10 | 18.11 | 17.32 | 16.78 |
| #1 | .0005 | .0116 | .0043 | .0014 | .0011 | .0021 | .0019 | .0099 |
| #2 | .0005 | -.0037 | .0041 | .0016 | .0006 | .0027 | .0014 | .0126 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0089** | **-.0384** | **.0020** | **.0044** | **.0006** | **-.0004** | **.0017** | **.0023** |
| Stddev | .0004 | .0102 | .0001 | .0037 | .0000 | .0029 | .0000 | .0001 |
| %RSD | 4.476 | 26.57 | 3.222 | 84.33 | 1.283 | 656.0 | .3897 | 5.698 |
| #1 | .0086 | -.0312 | .0020 | .0070 | .0006 | -.0025 | .0017 | .0022 |
| #2 | .0092 | -.0456 | .0021 | .0018 | .0006 | .0016 | .0017 | .0024 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: LLCRI Acquired: 9/7/2010 14:40:09 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-89-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1802** | **.0209** | **.0026** | **.2192** | **.0105** | **.0024** | **.0020** | **.0017** |
| Stddev | .1545 | .0005 | .0003 | .0205 | .0004 | .0006 | .0002 | .0001 |
| %RSD | 85.76 | 2.378 | 12.00 | 9.350 | 4.180 | 23.08 | 7.879 | 5.420 |
| #1 | .0709 | .0213 | .0028 | .2047 | .0102 | .0028 | .0019 | .0018 |
| #2 | .2894 | .0206 | .0024 | .2337 | .0108 | .0020 | .0022 | .0016 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0183** | F **.1075** | **.0010** | **.0097** | **.0135** | **.00037** |
| Stddev | .0041 | .0202 | .0000 | .0006 | .0029 | .00030 |
| %RSD | 22.32 | 18.75 | 4.132 | 5.983 | 21.55 | 80.999 |
| #1 | .0154 | .1218 | .0010 | .0101 | .0156 | .00016 |
| #2 | .0212 | .0932 | .0009 | .0093 | .0114 | .00058 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | .0500 | | | | |
| Range | | 100.0% | | | | |

WS 9/15/10

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5212.9 | 107010. | 3864.5 | 1177.0 |
| Stddev | 6.2 | 63. | 6.3 | 1.9 |
| %RSD | .11872 | .05866 | .16321 | .16074 |
| #1 | 5208.5 | 106960. | 3869.0 | 1178.4 |
| #2 | 5217.2 | 107050. | 3860.1 | 1175.7 |

Sample Name: ICSA Acquired: 9/7/2010 14:43:47 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-83-C

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **19.33** | **489.0** | **.0295** | **-.0275** | **-.0022** | **-.00051** | **-.0078** | **-.0045** |
| Stddev | .01 | .1 | .0007 | .0017 | .0015 | .00000 | .0013 | .0000 |
| %RSD | .0751 | .0220 | 2.462 | 6.059 | 66.43 | .08682 | 16.40 | .4103 |
| #1 | 19.32 | 488.9 | .0301 | -.0286 | -.0033 | -.00051 | -.0087 | -.0045 |
| #2 | 19.34 | 489.1 | .0290 | -.0263 | -.0012 | -.00051 | -.0069 | -.0045 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0115** | **489.1** | ***** | **.0035** | **-.0079** | **.2106** | **.0024** | **197.1** |
| Stddev | .0001 | 3.3 | ----- | .0001 | .0002 | .0009 | .0007 | .2 |
| %RSD | 1.244 | .6797 | ----- | 2.424 | 2.986 | .4215 | 30.49 | .1218 |
| #1 | .0114 | 491.4 | ----- | .0036 | -.0077 | .2100 | .0019 | 197.3 |
| #2 | .0116 | 486.7 | ----- | .0035 | -.0081 | .2112 | .0029 | 197.0 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0292** | **514.2** | ***** | **429.4** | **.0185** | **.0186** | **-.0017** | **.0023** |
| Stddev | .0007 | .3 | ----- | 8.1 | .0001 | .0016 | .0001 | .0002 |
| %RSD | 2.545 | .0565 | ----- | 1.893 | .6675 | 8.659 | 6.623 | 10.25 |
| #1 | -.0287 | 514.0 | ----- | 435.2 | .0185 | .0175 | -.0016 | .0025 |
| #2 | -.0298 | 514.4 | ----- | 423.7 | .0184 | .0198 | -.0018 | .0021 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSA Acquired: 9/7/2010 14:43:47 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-83-C

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0472** | **-.0110** | **.0009** | **.0942** | **.0004** | **.0021** | **-.0017** | **-.0002** |
| Stddev | .1302 | .0033 | .0002 | .0135 | .0006 | .0009 | .0004 | .0001 |
| %RSD | 275.9 | 30.11 | 27.42 | 14.29 | 173.1 | 41.02 | 21.70 | 78.66 |
| #1 | .1392 | -.0087 | .0011 | .1037 | -.0001 | .0015 | -.0019 | -.0002 |
| #2 | -.0449 | -.0134 | .0007 | .0847 | .0008 | .0027 | -.0014 | -.0001 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0081** | **.0162** | **.0040** | **-.0001** | **.0059** | **.01170** |
| Stddev | .0072 | .0107 | .0001 | .0025 | .0029 | .00007 |
| %RSD | 88.82 | 66.13 | 3.342 | 2698. | 48.41 | .61598 |
| #1 | .0030 | .0086 | .0041 | .0017 | .0039 | .01175 |
| #2 | .0132 | .0238 | .0039 | -.0019 | .0080 | .01165 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 4730.9 | 94735. | 3592.0 | 1062.0 |
| Stddev | 5.3 | 282. | 17.4 | 3.3 |
| %RSD | .11262 | .29729 | .48547 | .31119 |
| #1 | 4727.2 | 94536. | 3579.6 | 1064.3 |
| #2 | 4734.7 | 94935. | 3604.3 | 1059.7 |

Sample Name: ICSAB Acquired: 9/7/2010 14:47:51 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-92-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **19.51** | **489.1** | **1.005** | **-.0258** | **.5392** | **.50174** | **-.0015** | **.9452** |
| Stddev | .03 | .9 | .001 | .0060 | .0001 | .00384 | .0007 | .0005 |
| %RSD | .1402 | .1935 | .1315 | 23.16 | .0253 | .76437 | 48.12 | .0524 |
| #1 | 19.49 | 488.4 | 1.006 | -.0300 | .5391 | .49903 | -.0021 | .9449 |
| #2 | 19.53 | 489.7 | 1.004 | -.0215 | .5393 | .50445 | -.0010 | .9456 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9621** | **488.8** | ***** | **.5168** | **.4697** | F **.6793** | **.4993** | **197.4** |
| Stddev | .0023 | .2 | ----- | .0000 | .0012 | .0007 | .0035 | .2 |
| %RSD | .2434 | .0333 | ----- | .0097 | .2648 | .1045 | .6924 | .0798 |
| #1 | .9605 | 489.0 | ----- | .5169 | .4688 | .6788 | .4968 | 197.5 |
| #2 | .9638 | 488.7 | ----- | .5168 | .4706 | .6798 | .5017 | 197.3 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass |
| Value | | | | | | .5000 | | |
| Range | | | | | | 20.00% | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9369** | **518.6** | ***** | **436.5** | **.5195** | **.5659** | **-.0019** | **.9493** |
| Stddev | .0012 | 1.0 | ----- | 1.1 | .0011 | .0020 | .0004 | .0011 |
| %RSD | .1310 | .1935 | ----- | .2420 | .2064 | .3579 | 21.10 | .1155 |
| #1 | .9378 | 517.9 | ----- | 437.3 | .5187 | .5644 | -.0016 | .9485 |
| #2 | .9360 | 519.3 | ----- | 435.8 | .5202 | .5673 | -.0022 | .9501 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSAB Acquired: 9/7/2010 14:47:51 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A ICP7-92-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0090** | **-.0101** | **1.010** | **.1127** | **.0005** | **.5262** | **.9500** | **.9312** |
| Stddev | .0901 | .0055 | .007 | .0247 | .0012 | .0002 | .0022 | .0025 |
| %RSD | 1004. | 55.18 | .6778 | 21.90 | 260.3 | .0447 | .2268 | .2695 |
| #1 | .0547 | -.0061 | 1.006 | .0953 | -.0004 | .5261 | .9515 | .9295 |
| #2 | -.0727 | -.0140 | 1.015 | .1302 | .0013 | .5264 | .9484 | .9330 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0031** | **-.0009** | **.0040** | **.0010** | **.0081** | **.01187** |
| Stddev | .0117 | .0225 | .0004 | .0038 | .0001 | .00030 |
| %RSD | 382.2 | 2584. | 10.63 | 399.7 | 1.255 | 2.5113 |
| #1 | .0113 | -.0168 | .0037 | .0037 | .0080 | .01166 |
| #2 | -.0052 | .0150 | .0043 | -.0018 | .0081 | .01208 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 4722.3 | 94995. | 3637.4 | 1061.4 |
| Stddev | 6.6 | 328. | 8.0 | 3.2 |
| %RSD | .13943 | .34507 | .22033 | .30064 |
| #1 | 4727.0 | 94764. | 3631.8 | 1059.2 |
| #2 | 4717.7 | 95227. | 3643.1 | 1063.7 |

Sample Name: RB Acquired: 9/7/2010 14:51:53 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0044** | **.0008** | **.0033** | **-.0028** | **.00002** | **-.0013** | **.0001** |
| #1 | .0004 | .0028 | .0000 | .0020 | -.0032 | .00003 | -.0005 | .0000 |
| #2 | .0006 | .0059 | .0017 | .0045 | -.0025 | .00000 | -.0021 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0103** | **.0004** | **-.0002** | **-.0002** | **.0004** | **.0005** | **.0025** |
| #1 | .0001 | -.0089 | .0005 | -.0007 | .0000 | .0004 | .0003 | .0030 |
| #2 | .0000 | -.0118 | .0003 | .0004 | -.0004 | .0003 | .0007 | .0020 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **.0006** | **.0021** | **-.0003** | **-.0003** | **-.0001** | **.0535** | **-.0007** |
| #1 | -.0016 | .0005 | .0013 | -.0003 | -.0001 | .0001 | .0504 | -.0007 |
| #2 | .0000 | .0006 | .0029 | -.0004 | -.0006 | -.0004 | .0566 | -.0007 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0006** | **.0149** | **.0007** | **.0001** | **-.0003** | **-.0003** | **.0000** | **.0307** |
| #1 | -.0003 | .0228 | .0004 | .0002 | -.0003 | -.0003 | -.0014 | .0293 |
| #2 | -.0008 | .0070 | .0009 | -.0001 | -.0002 | -.0003 | .0015 | .0321 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **-.0001** | **-.0013** | **.00037** |
| #1 | -.0001 | .0005 | -.0009 | .00026 |
| #2 | -.0003 | -.0006 | -.0017 | .00047 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5252.8 | 107930. | 3996.6 | 1181.2 |
| #1 | 5265.1 | 108180. | 4005.7 | 1183.7 |
| #2 | 5240.6 | 107680. | 3987.4 | 1178.7 |

Sample Name: SEM MB Acquired: 9/7/2010 14:54:20 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0033** | F **.0059** | **-.0005** | **.0020** | F **-.0030** | **.00002** | F **-.0029** | **.0001** |
| #1 | .0034 | .0044 | .0000 | .0029 | -.0024 | .00003 | -.0041 | .0001 |
| #2 | .0032 | .0073 | -.0011 | .0010 | -.0035 | .00001 | -.0017 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **.0025** | **.0140** | F **-.0003** | **-.0003** | **.0054** | **.0050** | F **.0075** |
| #1 | .0000 | .0033 | .0140 | -.0003 | -.0002 | .0053 | .0050 | .0030 |
| #2 | .0000 | .0016 | .0140 | -.0003 | -.0005 | .0055 | .0050 | .0121 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0020** | F **-.0004** | **-.0002** | **-.0005** | **.0004** | F **.1526** | **-.0002** |
| #1 | .0010 | .0020 | -.0015 | -.0002 | -.0005 | .0002 | .1713 | .0009 |
| #2 | .0000 | .0019 | .0007 | -.0003 | -.0005 | .0006 | .1340 | -.0013 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | F **.0603** | **.0001** | **-.0001** | **.1754** | **.1753** | **-.0020** | **.0425** |
| #1 | .0000 | .0743 | -.0002 | .0000 | .1754 | .1753 | -.0013 | .0232 |
| #2 | -.0008 | .0463 | .0003 | -.0002 | .1753 | .1753 | -.0027 | .0618 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0008** | **.0044** | **.00021** |
| #1 | .0004 | -.0001 | .0036 | .00035 |
| #2 | .0001 | .0017 | .0052 | .00006 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5212.7 | 106800. | 3801.1 | 1171.3 |
| #1 | 5215.4 | 106510. | 3806.8 | 1172.3 |
| #2 | 5210.0 | 107080. | 3795.5 | 1170.3 |

Sample Name: K1008846-MB Acquired: 9/7/2010 14:57:17 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0032** | F **.0043** | **-.0012** | **-.0008** | F **-.0023** | **-.00017** | F **-.0067** | **-.0002** |
| #1 | .0039 | .0037 | -.0005 | .0002 | -.0029 | -.00019 | -.0063 | -.0002 |
| #2 | .0025 | .0049 | -.0019 | -.0018 | -.0018 | -.00015 | -.0072 | -.0003 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0022** | **.0194** | F **.0002** | **.0003** | **.0008** | **-.0001** | F **.0039** |
| #1 | .0000 | .0017 | .0193 | .0003 | .0003 | .0006 | .0000 | .0098 |
| #2 | .0000 | -.0062 | .0195 | .0001 | .0003 | .0009 | -.0002 | -.0020 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0017** | **.0022** | F **.0017** | **-.0001** | **-.0005** | **-.0002** | F **.0732** | **.0025** |
| #1 | -.0017 | .0022 | .0014 | .0000 | -.0005 | -.0002 | .0447 | .0011 |
| #2 | -.0017 | .0022 | .0019 | -.0001 | -.0005 | -.0002 | .1017 | .0039 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0010** | F **.0853** | **-.0001** | **-.0002** | F **.0014** | F **.0012** | **.0065** | **.0648** |
| #1 | .0011 | .0732 | -.0003 | -.0006 | .0013 | .0012 | .0109 | .0652 |
| #2 | .0010 | .0973 | .0000 | .0003 | .0014 | .0012 | .0020 | .0643 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0020** | **-.0001** | **.00002** |
| #1 | .0001 | -.0004 | .0021 | -.00015 |
| #2 | -.0002 | -.0037 | -.0022 | .00019 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5056.5 | 105340. | 3640.2 | 1145.4 |
| #1 | 5039.7 | 105620. | 3634.3 | 1140.4 |
| #2 | 5073.3 | 105060. | 3646.1 | 1150.4 |

Sample Name: LCSW Acquired: 9/7/2010 14:59:45 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **3.890** | **.9191** | **1.776** | **4.066** | **.09073** | **1.677** | **.0932** | **.0946** |
| #1 | 3.886 | .9175 | 1.777 | 4.049 | .09062 | 1.678 | .0931 | .0948 |
| #2 | 3.895 | .9206 | 1.775 | 4.082 | .09083 | 1.677 | .0932 | .0944 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **21.08** | **.3968** | **.9808** | **.4585** | **.4839** | **2.000** | **.9458** | F **21.02** |
| #1 | 20.96 | .3967 | .9823 | .4581 | .4836 | 1.986 | .9483 | 21.00 |
| #2 | 21.19 | .3969 | .9793 | .4589 | .4843 | 2.013 | .9432 | 21.03 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9580** | **1.924** | **.9659** | F **20.87** | **1.600** | **.0957** | F **21.28** | **5.009** |
| #1 | .9593 | 1.924 | .9687 | 20.84 | 1.599 | .0958 | 21.31 | 5.018 |
| #2 | .9567 | 1.923 | .9631 | 20.90 | 1.600 | .0957 | 21.24 | 4.999 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9988** | **.9607** | **.9110** | **4.752** | **.1157** | **.0003** | **1.775** | **.0032** |
| #1 | 1.000 | .9644 | .9096 | 4.743 | .1169 | .0004 | 1.786 | .0006 |
| #2 | .9971 | .9570 | .9125 | 4.761 | .1146 | .0001 | 1.765 | .0059 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **5.2548** |
| #1 | 5.2370 |
| #2 | 5.2726 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 4974.3 | 103570. | 3727.6 | 1129.5 |
| #1 | 4969.6 | 103470. | 3740.5 | 1127.4 |
| #2 | 4978.9 | 103670. | 3714.7 | 1131.5 |

Sample Name: K1008846-003 Acquired: 9/7/2010 15:02:48 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0164** | F **.0135** | **.0055** | **-.0064** | F **-.0015** | **-.00022** | F **.0069** | **-.0012** |
| #1 | .0163 | .0143 | .0041 | -.0091 | -.0015 | -.00016 | .0071 | -.0012 |
| #2 | .0166 | .0127 | .0069 | -.0038 | -.0014 | -.00028 | .0066 | -.0012 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0022** | **.3775** | **.3755** | F **.0048** | **-.0010** | **.2614** | **.2334** | F **42.39** |
| #1 | .0022 | .3851 | .3764 | .0054 | -.0009 | .2612 | .2340 | 42.49 |
| #2 | .0021 | .3700 | .3746 | .0041 | -.0012 | .2615 | .2329 | 42.30 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0007** | **.0140** | F **.0128** | **.2645** | **.0003** | **.0076** | F **17.28** | **.0011** |
| #1 | -.0021 | .0141 | .0125 | .2644 | .0005 | .0075 | 17.31 | .0010 |
| #2 | .0008 | .0139 | .0131 | .2646 | .0002 | .0077 | 17.26 | .0011 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **.1783** | **.0008** | **.0026** | **1.095** | **1.075** | **.0013** | **2.863** |
| #1 | .0007 | .1695 | .0004 | .0026 | 1.094 | 1.075 | .0025 | 2.865 |
| #2 | -.0003 | .1871 | .0011 | .0025 | 1.095 | 1.075 | .0001 | 2.862 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0060** | **-.0014** | **-.0011** | **.00079** |
| #1 | .0063 | .0003 | -.0016 | .00085 |
| #2 | .0057 | -.0031 | -.0005 | .00073 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5157.3 | 107410. | 3831.6 | 1180.9 |
| #1 | 5163.2 | 107440. | 3828.6 | 1182.0 |
| #2 | 5151.5 | 107380. | 3834.6 | 1179.8 |

Sample Name: K1008846-003D Acquired: 9/7/2010 15:06:32 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0166** | F **.0142** | **.0069** | **-.0081** | F **-.0019** | **-.00011** | F **.0043** | **-.0012** |
| #1 | .0164 | .0154 | .0077 | -.0075 | -.0020 | -.00015 | .0042 | -.0011 |
| #2 | .0167 | .0131 | .0061 | -.0087 | -.0017 | -.00007 | .0045 | -.0012 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0024** | **.3873** | **.3970** | F **.0047** | **-.0010** | **.2681** | **.2414** | F **43.89** |
| #1 | .0024 | .3837 | .3966 | .0047 | -.0008 | .2680 | .2409 | 43.87 |
| #2 | .0024 | .3909 | .3975 | .0048 | -.0011 | .2682 | .2420 | 43.90 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0010** | **.0127** | F **.0136** | **.2726** | **-.0002** | **.0083** | F **17.90** | **-.0015** |
| #1 | .0014 | .0127 | .0154 | .2722 | -.0003 | .0084 | 17.91 | -.0005 |
| #2 | .0006 | .0126 | .0119 | .2730 | -.0001 | .0083 | 17.88 | -.0025 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | F **.1938** | **.0009** | **.0023** | **1.139** | **1.132** | **-.0021** | **3.348** |
| #1 | .0006 | .1891 | .0006 | .0025 | 1.137 | 1.131 | -.0006 | 3.383 |
| #2 | .0003 | .1984 | .0012 | .0020 | 1.142 | 1.133 | -.0036 | 3.313 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0063** | **.0010** | **-.0034** | **.00063** |
| #1 | .0061 | -.0011 | -.0020 | .00031 |
| #2 | .0064 | .0031 | -.0048 | .00095 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5187.6 | 107850. | 3854.0 | 1189.4 |
| #1 | 5188.2 | 107620. | 3858.8 | 1189.5 |
| #2 | 5187.0 | 108090. | 3849.1 | 1189.3 |

Sample Name: CCVA2 Acquired: 9/7/2010 15:10:16 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2479** | **.2493** | **.2502** | **.2636** | **.2491** | **.24991** | **.2560** | **.2420** |
| Stddev | .0002 | .0017 | .0010 | .0010 | .0010 | .00014 | .0006 | .0005 |
| %RSD | .0670 | .6728 | .4156 | .3966 | .3856 | .05549 | .2523 | .1971 |
| #1 | .2478 | .2481 | .2509 | .2643 | .2497 | .25001 | .2555 | .2417 |
| #2 | .2480 | .2505 | .2495 | .2628 | .2484 | .24981 | .2564 | .2424 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2482** | **.2320** | **.2476** | **.2465** | **.2508** | **.2422** | **.2517** | **.2507** |
| Stddev | .0003 | .0012 | .0004 | .0008 | .0004 | .0009 | .0005 | .0030 |
| %RSD | .1278 | .5081 | .1713 | .3245 | .1406 | .3843 | .2148 | 1.194 |
| #1 | .2480 | .2312 | .2479 | .2460 | .2511 | .2415 | .2521 | .2486 |
| #2 | .2485 | .2329 | .2473 | .2471 | .2506 | .2428 | .2514 | .2528 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2508** | **.2543** | **.2443** | **.2543** | **.2431** | **.2428** | **.2478** | **.2517** |
| Stddev | .0003 | .0067 | .0006 | .0021 | .0003 | .0012 | .0006 | .0007 |
| %RSD | .1219 | 2.635 | .2440 | .8447 | .1402 | .4861 | .2490 | .2590 |
| #1 | .2505 | .2495 | .2447 | .2528 | .2429 | .2420 | .2473 | .2521 |
| #2 | .2510 | .2590 | .2439 | .2558 | .2434 | .2436 | .2482 | .2512 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA2 Acquired: 9/7/2010 15:10:16 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.606** | **.2556** | **.2549** | **.2974** | **.2467** | **.2448** | **.2511** | **.2532** |
| Stddev | .018 | .0031 | .0016 | .0043 | .0004 | .0016 | .0004 | .0005 |
| %RSD | .6724 | 1.212 | .6185 | 1.434 | .1447 | .6460 | .1514 | .1811 |
| #1 | 2.594 | .2534 | .2560 | .3004 | .2470 | .2437 | .2509 | .2529 |
| #2 | 2.619 | .2578 | .2538 | .2944 | .2465 | .2460 | .2514 | .2535 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0040** | **.1640** | **.2434** | **.2521** | **.0020** | **.00038** |
| Stddev | .0012 | .0167 | .0004 | .0005 | .0023 | .00032 |
| %RSD | 30.72 | 10.16 | .1459 | .1893 | 116.7 | 83.077 |
| #1 | -.0049 | .1758 | .2431 | .2517 | .0036 | .00016 |
| #2 | -.0031 | .1522 | .2436 | .2524 | .0003 | .00060 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5281.4 | 109170. | 3854.5 | 1197.4 |
| Stddev | .1 | 21. | 10.3 | .3 |
| %RSD | .00255 | .01968 | .26742 | .02349 |
| #1 | 5281.5 | 109150. | 3847.3 | 1197.2 |
| #2 | 5281.3 | 109180. | 3861.8 | 1197.6 |

Sample Name: CCVB2 Acquired: 9/7/2010 15:13:03 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.989** | **9.791** | **-.0007** | **1.000** | **9.995** | **.00000** | **.0082** | **-.0002** |
| Stddev | .034 | .357 | .0003 | .013 | .001 | .0000 | .0013 | .0000 |
| %RSD | .4896 | 3.649 | 44.37 | 1.296 | .0054 | 1057.8 | 16.51 | 13.24 |
| #1 | 6.965 | 10.04 | -.0005 | .9909 | 9.995 | -.00001 | .0072 | -.0002 |
| #2 | 7.014 | 9.539 | -.0010 | 1.009 | 9.994 | .00001 | .0091 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **9.889** | **9.692** | **.0039** | **-.0002** | **.0125** | **.0009** | **9.921** |
| Stddev | .0001 | .014 | .069 | .0051 | .0008 | .0004 | .0006 | .045 |
| %RSD | 14.46 | .1384 | .7078 | 129.0 | 317.5 | 3.465 | 65.65 | .4576 |
| #1 | .0006 | 9.880 | 9.644 | .0003 | .0003 | .0128 | .0005 | 9.889 |
| #2 | .0007 | 9.899 | 9.741 | .0075 | -.0008 | .0122 | .0013 | 9.953 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0008** | **9.795** | **9.683** | **10.35** | **.9843** | **1.064** | **-.0003** | **.0090** |
| Stddev | .0003 | .080 | .114 | .02 | .0082 | .063 | .0001 | .0005 |
| %RSD | 42.85 | .8168 | 1.182 | .2188 | .8297 | 5.958 | 22.54 | 5.517 |
| #1 | .0005 | 9.738 | 9.602 | 10.37 | .9785 | 1.020 | -.0003 | .0093 |
| #2 | .0010 | 9.851 | 9.764 | 10.34 | .9900 | 1.109 | -.0002 | .0086 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB2 Acquired: 9/7/2010 15:13:03 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.54** | **-.0018** | **.0010** | **10.59** | **.0002** | **.0030** | **.0028** | **.0029** |
| Stddev | .01 | .0010 | .0006 | .01 | .0003 | .0004 | .0046 | .0046 |
| %RSD | .1111 | 57.57 | 59.09 | .0719 | 111.5 | 12.02 | 164.6 | 157.8 |
| #1 | 10.53 | -.0025 | .0006 | 10.60 | .0004 | .0027 | .0061 | .0062 |
| #2 | 10.55 | -.0011 | .0014 | 10.58 | .0001 | .0032 | -.0005 | -.0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.821** | **10.57** | **.0004** | **-.0005** | **1.036** | **.98766** |
| Stddev | .120 | .02 | .0003 | .0014 | .005 | .00026 |
| %RSD | 1.222 | .2322 | 79.49 | 276.8 | .4815 | .02611 |
| #1 | 9.736 | 10.58 | .0002 | .0005 | 1.040 | .98785 |
| #2 | 9.906 | 10.55 | .0007 | -.0015 | 1.032 | .98748 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5077.0 | 102850. | 3940.6 | 1151.8 |
| Stddev | 45.4 | 5705. | 10.9 | 6.9 |
| %RSD | .89502 | 5.5464 | .27575 | .60152 |
| #1 | 5044.8 | 106890. | 3948.3 | 1146.9 |
| #2 | 5109.1 | 98818. | 3933.0 | 1156.7 |

Sample Name: CCB3 Acquired: 9/7/2010 15:17:01 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0056** | **-.0011** | **.0023** | **-.0012** | **-.00008** | **-.0019** | **.0000** |
| Stddev | .0001 | .0022 | .0015 | .0014 | .0004 | .00002 | .0002 | .0001 |
| %RSD | 12.98 | 39.07 | 138.7 | 61.21 | 30.89 | 22.175 | 12.72 | 258.1 |
| #1 | .0004 | .0071 | .0000 | .0013 | -.0010 | -.00006 | -.0020 | .0001 |
| #2 | .0005 | .0040 | -.0022 | .0033 | -.0015 | -.00009 | -.0017 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0083** | **.0003** | **-.0001** | **-.0001** | **.0003** | **.0002** | **.0041** |
| Stddev | .0001 | .0075 | .0000 | .0002 | .0002 | .0001 | .0000 | .0019 |
| %RSD | 33.54 | 89.33 | 15.56 | 138.5 | 233.0 | 24.36 | 12.58 | 45.13 |
| #1 | .0002 | .0136 | .0002 | .0000 | -.0003 | .0004 | .0001 | .0028 |
| #2 | .0001 | .0031 | .0003 | -.0002 | .0001 | .0003 | .0002 | .0054 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0033** | **.0006** | **.0012** | **.0000** | **-.0021** | **.0000** | **.0003** |
| Stddev | .0008 | .0376 | .0000 | .0010 | .0000 | .0022 | .0000 | .0004 |
| %RSD | 3190. | 1127. | 4.129 | 80.89 | 249.4 | 101.8 | 301.7 | 147.3 |
| #1 | -.0006 | -.0233 | .0006 | .0020 | .0000 | -.0006 | .0001 | .0005 |
| #2 | .0006 | .0299 | .0006 | .0005 | .0000 | -.0036 | .0000 | .0000 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB3 Acquired: 9/7/2010 15:17:01 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0399** | **-.0005** | **.0006** | **.0556** | **.0002** | **.0001** | **-.0002** | **-.0002** |
| Stddev | .0343 | .0023 | .0001 | .0090 | .0002 | .0002 | .0001 | .0000 |
| %RSD | 85.97 | 434.1 | 15.03 | 16.09 | 116.4 | 372.8 | 35.79 | 6.175 |
| #1 | .0156 | -.0022 | .0006 | .0493 | .0000 | .0002 | -.0001 | -.0002 |
| #2 | .0641 | .0011 | .0005 | .0619 | .0003 | -.0001 | -.0002 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0012** | **.0206** | **-.0001** | **-.0002** | **.0012** | **.00011** |
| Stddev | .0026 | .0208 | .0001 | .0047 | .0049 | .00017 |
| %RSD | 222.2 | 101.1 | 83.01 | 2525. | 398.9 | 150.49 |
| #1 | .0007 | .0059 | .0000 | .0032 | -.0022 | -.00001 |
| #2 | -.0030 | .0354 | -.0002 | -.0035 | .0047 | .00023 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5197.2 | 107290. | 3943.2 | 1165.7 |
| Stddev | 2.3 | 344. | 12.0 | 2.3 |
| %RSD | .04375 | .32103 | .30352 | .19664 |
| #1 | 5198.8 | 107050. | 3934.7 | 1167.3 |
| #2 | 5195.6 | 107530. | 3951.7 | 1164.1 |

Sample Name: K1008846-003S Acquired: 9/7/2010 15:20:33 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **3.771** | **.8704** | **1.693** | **3.808** | **.08715** | **1.622** | **.0860** | **.0912** |
| #1 | 3.758 | .8711 | 1.693 | 3.802 | .08720 | 1.627 | .0861 | .0910 |
| #2 | 3.784 | .8697 | 1.693 | 3.813 | .08709 | 1.617 | .0858 | .0915 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **20.03** | **.3745** | **.9219** | **.6703** | **.6756** | F **40.45** | **.8816** | F **19.99** |
| #1 | 20.02 | .3746 | .9182 | .6718 | .6749 | 40.37 | .8810 | 19.94 |
| #2 | 20.04 | .3744 | .9255 | .6688 | .6763 | 40.53 | .8822 | 20.05 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.139** | **1.784** | **.9157** | F **35.43** | **1.540** | **.0909** | F **20.16** | **4.671** |
| #1 | 1.142 | 1.781 | .9134 | 35.42 | 1.540 | .0908 | 20.08 | 4.672 |
| #2 | 1.136 | 1.787 | .9181 | 35.44 | 1.541 | .0911 | 20.25 | 4.670 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9347** | **1.857** | **1.821** | **4.576** | **6.822** | **.0067** | **1.643** | **-.0007** |
| #1 | .9359 | 1.856 | 1.820 | 4.580 | 6.808 | .0068 | 1.639 | .0009 |
| #2 | .9335 | 1.859 | 1.822 | 4.572 | 6.836 | .0066 | 1.646 | -.0023 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **4.9473** |
| #1 | 4.9452 |
| #2 | 4.9495 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5044.1 | 104390. | 3759.7 | 1157.0 |
| #1 | 5050.2 | 104430. | 3750.1 | 1156.0 |
| #2 | 5038.0 | 104350. | 3769.4 | 1158.0 |

Sample Name: RB Acquired: 9/7/2010 15:24:15 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | F **.0020** | **-.0009** | **.0007** | F **-.0029** | **-.00004** | F **-.0045** | **.0000** |
| #1 | .0004 | .0005 | -.0014 | .0017 | -.0029 | -.00004 | -.0038 | .0001 |
| #2 | .0003 | .0036 | -.0004 | -.0002 | -.0029 | -.00004 | -.0052 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0020** | **.0005** | F **-.0004** | **-.0003** | **.0003** | **.0007** | F **.0023** |
| #1 | -.0001 | -.0027 | .0004 | -.0004 | -.0003 | .0002 | .0011 | .0070 |
| #2 | .0000 | -.0012 | .0006 | -.0003 | -.0004 | .0003 | .0004 | -.0023 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0012** | **.0001** | F **-.0009** | **-.0002** | **.0005** | **-.0001** | F **-.0013** | **.0023** |
| #1 | -.0005 | .0001 | -.0005 | -.0002 | .0005 | .0000 | .0345 | .0027 |
| #2 | -.0020 | .0002 | -.0014 | -.0003 | .0004 | -.0001 | -.0371 | .0019 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **.0170** | **.0007** | **.0002** | F **.0000** | F **-.0002** | **.0020** | **.0382** |
| #1 | -.0007 | .0382 | .0009 | -.0001 | .0001 | -.0002 | .0032 | -.0150 |
| #2 | .0007 | -.0042 | .0005 | .0005 | -.0002 | -.0002 | .0008 | .0915 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0014** | **-.0002** | **.00005** |
| #1 | .0000 | .0019 | .0029 | .00010 |
| #2 | .0001 | .0010 | -.0033 | .00000 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5211.9 | 107280. | 4057.0 | 1169.5 |
| #1 | 5207.3 | 107320. | 4063.4 | 1170.5 |
| #2 | 5216.5 | 107250. | 4050.6 | 1168.5 |

Sample Name: K1008750-MB Acquired: 9/7/2010 15:26:43 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | F **.0026** | **-.0004** | **.0011** | F **-.0029** | **-.00004** | F **-.0058** | **.0000** |
| #1 | .0009 | .0009 | .0002 | -.0021 | -.0027 | -.00007 | -.0063 | -.0001 |
| #2 | .0010 | .0043 | -.0010 | .0043 | -.0030 | -.00001 | -.0052 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0030** | **.0032** | F **-.0002** | **.0002** | **.0004** | **-.0002** | F **.0085** |
| #1 | -.0001 | -.0105 | .0034 | -.0006 | .0008 | .0005 | .0000 | .0087 |
| #2 | .0000 | .0044 | .0031 | .0002 | -.0003 | .0003 | -.0003 | .0084 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **.0021** | F **.0015** | **-.0001** | **.0003** | **.0003** | F **.0259** | **-.0001** |
| #1 | -.0002 | .0020 | .0008 | -.0001 | .0003 | .0006 | .0334 | -.0004 |
| #2 | -.0005 | .0021 | .0022 | -.0001 | .0004 | -.0001 | .0185 | .0002 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | F **.0266** | **.0005** | **.0003** | F **.0000** | F **-.0001** | **.2351** | **.0224** |
| #1 | .0006 | .0351 | .0002 | .0002 | .0000 | -.0001 | .2350 | .0068 |
| #2 | .0003 | .0181 | .0007 | .0005 | .0000 | -.0002 | .2352 | .0380 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0025** | **.0001** | **.00071** |
| #1 | -.0002 | .0029 | -.0005 | .00064 |
| #2 | -.0003 | .0021 | .0006 | .00078 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5230.4 | 107990. | 3952.1 | 1178.3 |
| #1 | 5237.5 | 108400. | 3931.0 | 1181.8 |
| #2 | 5223.2 | 107580. | 3973.2 | 1174.8 |

Sample Name: K1008750-005 Acquired: 9/7/2010 15:29:09 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0106** | F **.0138** | **-.0013** | **-.0002** | F **-.0020** | **-.00006** | F **-.0055** | **.0000** |
| #1 | .0107 | .0130 | -.0005 | .0019 | -.0011 | -.00007 | -.0043 | .0000 |
| #2 | .0105 | .0146 | -.0020 | -.0023 | -.0029 | -.00005 | -.0066 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0876** | **.1104** | F **.0002** | **.0001** | **.0006** | **-.0007** | F **.0135** |
| #1 | .0001 | .0860 | .1105 | -.0002 | .0002 | .0005 | .0001 | .0107 |
| #2 | .0001 | .0893 | .1104 | .0005 | .0001 | .0007 | -.0014 | .0163 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0370** | **.0388** | **.0010** | **-.0005** | **-.0001** | F **.0418** | **.0006** |
| #1 | -.0003 | .0370 | .0375 | .0010 | -.0003 | .0000 | .0189 | .0006 |
| #2 | .0007 | .0370 | .0402 | .0010 | -.0007 | -.0002 | .0648 | .0007 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0006** | F **.0652** | **.0006** | **-.0001** | F **.0005** | F **.0004** | **.2459** | **.0337** |
| #1 | -.0009 | .0663 | .0002 | -.0003 | .0005 | .0003 | .2475 | .0282 |
| #2 | -.0002 | .0641 | .0011 | .0002 | .0005 | .0004 | .2442 | .0393 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0001** | **-.0015** | **.00030** |
| #1 | .0003 | -.0017 | .0003 | .00030 |
| #2 | .0002 | .0015 | -.0034 | .00031 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5217.6 | 107500. | 3911.5 | 1172.8 |
| #1 | 5222.0 | 107470. | 3874.1 | 1174.2 |
| #2 | 5213.2 | 107530. | 3948.9 | 1171.5 |

Sample Name: RB Acquired: 9/7/2010 15:32:07 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **-.0014** | **-.0028** | **.0004** | F **-.0011** | **-.00001** | F **-.0032** | **.0001** |
| #1 | .0002 | .0002 | -.0036 | .0006 | -.0017 | -.00005 | -.0035 | .0001 |
| #2 | .0000 | -.0029 | -.0019 | .0002 | -.0005 | .00004 | -.0029 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | F **-.0056** | **-.0004** | F **-.0003** | **.0002** | **.0003** | **.0003** | F **.0010** |
| #1 | .0000 | -.0022 | -.0005 | -.0003 | .0003 | -.0001 | .0000 | -.0017 |
| #2 | -.0001 | -.0090 | -.0004 | -.0004 | .0002 | .0006 | .0007 | .0037 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **-.0001** | F **.0005** | **-.0002** | **-.0001** | **-.0001** | F **.0568** | **-.0010** |
| #1 | .0001 | -.0001 | .0017 | -.0002 | -.0002 | .0001 | .0371 | -.0018 |
| #2 | -.0011 | .0000 | -.0008 | -.0002 | .0000 | -.0003 | .0764 | -.0001 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **.0513** | **.0007** | **.0000** | F **-.0004** | F **-.0003** | **.0023** | **.0172** |
| #1 | -.0002 | .0714 | .0005 | .0000 | -.0001 | -.0003 | -.0003 | .0131 |
| #2 | .0005 | .0311 | .0009 | .0000 | -.0006 | -.0003 | .0049 | .0214 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0037** | **.0016** | **.00009** |
| #1 | .0000 | .0042 | .0049 | .00001 |
| #2 | .0002 | .0031 | -.0017 | .00017 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5216.5 | 107340. | 3823.3 | 1178.3 |
| #1 | 5194.5 | 107050. | 3834.6 | 1173.8 |
| #2 | 5238.5 | 107640. | 3811.9 | 1182.9 |

Sample Name: K1008435-MB Acquired: 9/7/2010 15:34:34 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0015** | F **-.0002** | **.0009** | **.0009** | F **-.0021** | **-.00003** | F **-.0030** | **.0000** |
| #1 | .0014 | .0007 | .0011 | .0017 | -.0014 | -.00003 | -.0024 | .0001 |
| #2 | .0016 | -.0012 | .0007 | .0001 | -.0029 | -.00004 | -.0036 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **-.0094** | **.0051** | F **.0002** | **-.0004** | **.0004** | **-.0001** | F **.0020** |
| #1 | .0000 | -.0136 | .0051 | .0001 | -.0001 | .0000 | .0006 | .0021 |
| #2 | .0002 | -.0051 | .0051 | .0004 | -.0006 | .0008 | -.0007 | .0019 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **.0002** | F **.0004** | **-.0002** | **-.0006** | **-.0002** | F **.1421** | **.0025** |
| #1 | .0001 | .0002 | -.0016 | -.0002 | -.0006 | -.0001 | .1937 | .0022 |
| #2 | .0007 | .0003 | .0024 | -.0001 | -.0006 | -.0003 | .0905 | .0027 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **.0155** | **-.0005** | **.0002** | F **.0004** | F **.0004** | **.1460** | **.0161** |
| #1 | .0003 | .0390 | -.0002 | .0004 | .0002 | .0004 | .1479 | .0031 |
| #2 | -.0002 | -.0081 | -.0008 | .0000 | .0006 | .0004 | .1442 | .0290 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0009** | **.0017** | **.00017** |
| #1 | -.0003 | .0005 | .0008 | -.00006 |
| #2 | .0001 | .0013 | .0026 | .00041 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5203.5 | 108380. | 3859.0 | 1176.4 |
| #1 | 5215.6 | 108090. | 3842.6 | 1180.4 |
| #2 | 5191.4 | 108680. | 3875.3 | 1172.5 |

* [illegible] 9/8/10

Sample Name: LCSW Acquired: 9/7/2010 15:37:01 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **5.076** | **2.492** | **2.553** | **5.127** | **.12481** | **.9228** | **1.196** | **1.224** |
| #1 | 5.093 | 2.496 | 2.551 | 5.141 | .12489 | .9237 | 1.192 | 1.223 |
| #2 | 5.059 | 2.488 | 2.555 | 5.114 | .12473 | .9219 | 1.201 | 1.225 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.48** | **12.23** | **.5011** | **1.241** | **.6065** | **.6294** | **2.523** | **2.452** |
| #1 | 12.50 | 12.29 | .5009 | 1.240 | .6052 | .6323 | 2.532 | 2.436 |
| #2 | 12.45 | 12.16 | .5012 | 1.243 | .6079 | .6264 | 2.514 | 2.467 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.72** | **1.238** | **.9306** | **1.240** | F **12.85** | **2.416** | **.6298** | F **12.94** |
| #1 | 12.70 | 1.239 | .9310 | 1.236 | 12.80 | 2.416 | .6310 | 12.91 |
| #2 | 12.74 | 1.237 | .9302 | 1.243 | 12.90 | 2.417 | .6286 | 12.98 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **1.252** | **1.227** | **1.219** | **.1385** | **.0065** | **.0000** | **2.510** |
| #1 | .0001 | 1.253 | 1.220 | 1.220 | .1356 | .0201 | .0000 | 2.497 |
| #2 | .0000 | 1.251 | 1.235 | 1.218 | .1415 | -.0071 | .0001 | 2.523 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | ppm | ppm |
| Avg | **.0021** | **.00073** |
| #1 | .0022 | .00073 |
| #2 | .0020 | .00072 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5150.7 | 106150. | 3785.3 | 1169.0 |
| #1 | 5151.1 | 106100. | 3767.4 | 1173.9 |
| #2 | 5150.2 | 106210. | 3803.1 | 1164.1 |

Sample Name: LCSW Acquired: 9/7/2010 15:40:08 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A Si

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0011** | F **.0025** | **.0018** | **.0035** | F **-.0025** | **-.00009** | F **-.0051** | **.0000** |
| #1 | .0012 | .0035 | .0034 | .0045 | -.0031 | -.00008 | -.0046 | .0000 |
| #2 | .0010 | .0016 | .0001 | .0025 | -.0018 | -.00009 | -.0055 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **-.0085** | **.0013** | F **-.0004** | **.0002** | **.0004** | **-.0001** | F **.0021** |
| #1 | .0000 | -.0063 | .0013 | .0001 | .0000 | .0001 | .0002 | .0009 |
| #2 | .0002 | -.0107 | .0013 | -.0009 | .0003 | .0007 | -.0005 | .0033 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0025** | **.0003** | F **-.0016** | **-.0002** | **.0003** | **.0081** | F **.0709** | **.0014** |
| #1 | .0021 | .0003 | -.0012 | -.0003 | .0006 | .0080 | .0694 | .0018 |
| #2 | .0030 | .0003 | -.0021 | -.0002 | .0000 | .0081 | .0725 | .0010 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | F **16.83** | **.0000** | **-.0002** | F **-.0001** | F **-.0001** | **.1656** | **10.58** |
| #1 | -.0002 | 16.81 | .0000 | .0002 | .0000 | .0000 | .1649 | 10.50 |
| #2 | -.0003 | 16.86 | -.0001 | -.0007 | -.0001 | -.0002 | .1663 | 10.65 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0031** | **.0013** | **.00008** |
| #1 | .0000 | .0044 | .0003 | -.00026 |
| #2 | -.0001 | .0019 | .0022 | .00042 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5166.4 | 106880. | 3819.1 | 1168.4 |
| #1 | 5177.0 | 107130. | 3823.5 | 1169.9 |
| #2 | 5155.7 | 106620. | 3814.6 | 1167.0 |

Sample Name: K1008435-001 Acquired: 9/7/2010 15:43:56 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0188** | **.0203** | **-.0017** | **.0020** | F **-.0008** | **-.00010** | F **-.0106** | **.0000** |
| #1 | .0187 | .0200 | -.0016 | .0022 | -.0006 | -.00005 | -.0099 | .0000 |
| #2 | .0188 | .0206 | -.0018 | .0018 | -.0010 | -.00015 | -.0113 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **1.740** | **1.741** | F **-.0006** | **.0001** | **.0104** | **.0107** | **.0585** |
| #1 | .0000 | 1.745 | 1.740 | -.0011 | -.0001 | .0100 | .0108 | .0580 |
| #2 | .0001 | 1.735 | 1.743 | -.0001 | .0003 | .0107 | .0107 | .0590 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | **.6859** | **.7487** | **.0143** | **-.0001** | **.0034** | **.2701** | **.0019** |
| #1 | .0001 | .6869 | .7499 | .0143 | .0000 | .0034 | .2779 | .0006 |
| #2 | .0014 | .6848 | .7474 | .0142 | -.0001 | .0034 | .2623 | .0032 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **1.428** | **.0000** | **.0005** | F **.0005** | F **.0004** | **.1972** | **4.481** |
| #1 | -.0002 | 1.412 | .0002 | .0008 | .0007 | .0004 | .1951 | 4.475 |
| #2 | .0001 | 1.444 | -.0002 | .0002 | .0004 | .0003 | .1992 | 4.486 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0011** | **.0005** | **.01568** |
| #1 | .0002 | .0012 | -.0007 | .01561 |
| #2 | .0000 | -.0034 | .0018 | .01574 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5170.1 | 107290. | 3979.8 | 1173.5 |
| #1 | 5172.0 | 107260. | 3980.8 | 1175.1 |
| #2 | 5168.3 | 107320. | 3978.7 | 1171.9 |

Sample Name: K1008435-001D Acquired: 9/7/2010 15:46:54 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0185** | F **.0197** | **.0005** | **-.0003** | F **-.0009** | **-.00008** | F **-.0090** | **.0000** |
| #1 | .0185 | .0200 | -.0002 | .0010 | -.0002 | -.00010 | -.0085 | .0000 |
| #2 | .0185 | .0195 | .0011 | -.0017 | -.0016 | -.00007 | -.0095 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **1.713** | **1.718** | F **-.0003** | **-.0004** | **.0095** | **.0106** | **.0620** |
| #1 | .0000 | 1.711 | 1.716 | -.0003 | -.0003 | .0093 | .0110 | .0642 |
| #2 | .0000 | 1.716 | 1.719 | -.0004 | -.0005 | .0098 | .0101 | .0597 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.6738** | **.7387** | **.0142** | **-.0004** | **.0033** | **.2164** | **.0011** |
| #1 | .0007 | .6734 | .7422 | .0142 | -.0005 | .0034 | .2592 | .0013 |
| #2 | .0006 | .6742 | .7353 | .0142 | -.0004 | .0032 | .1737 | .0010 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **1.437** | **-.0004** | **.0005** | F **.0004** | F **.0004** | **.1591** | **4.442** |
| #1 | .0004 | 1.445 | -.0006 | .0003 | .0003 | .0004 | .1568 | 4.412 |
| #2 | -.0002 | 1.430 | -.0003 | .0007 | .0005 | .0004 | .1614 | 4.472 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0007** | **-.0022** | **.01557** |
| #1 | .0000 | .0021 | -.0045 | .01580 |
| #2 | .0001 | -.0008 | .0001 | .01534 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5204.1 | 107840. | 4036.7 | 1177.9 |
| #1 | 5206.2 | 108260. | 4043.1 | 1175.1 |
| #2 | 5201.9 | 107420. | 4030.2 | 1180.8 |

Sample Name: CCVA3 Acquired: 9/7/2010 15:49:50 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2462** | **.2445** | **.2496** | **.2580** | **.2499** | **.24470** | **.2339** | **.2407** |
| Stddev | .0005 | .0063 | .0033 | .0033 | .0012 | .00240 | .0041 | .0012 |
| %RSD | .2204 | 2.564 | 1.303 | 1.264 | .4803 | .98110 | 1.748 | .5001 |
| #1 | .2458 | .2401 | .2473 | .2557 | .2490 | .24300 | .2310 | .2399 |
| #2 | .2465 | .2489 | .2519 | .2603 | .2507 | .24639 | .2368 | .2416 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2480** | **.2344** | **.2451** | **.2452** | **.2502** | **.2408** | **.2488** | **.2489** |
| Stddev | .0006 | .0063 | .0007 | .0002 | .0014 | .0013 | .0027 | .0019 |
| %RSD | .2615 | 2.673 | .3030 | .0683 | .5666 | .5445 | 1.098 | .7560 |
| #1 | .2475 | .2300 | .2445 | .2451 | .2492 | .2399 | .2469 | .2475 |
| #2 | .2484 | .2389 | .2456 | .2453 | .2512 | .2418 | .2508 | .2502 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2483** | **.2159** | **.2424** | **.2608** | **.2409** | **.2488** | **.2468** | **.2508** |
| Stddev | .0014 | .0122 | .0007 | .0012 | .0013 | .0032 | .0000 | .0010 |
| %RSD | .5508 | 5.645 | .2837 | .4779 | .5195 | 1.304 | .0070 | .4118 |
| #1 | .2474 | .2245 | .2419 | .2617 | .2400 | .2511 | .2468 | .2501 |
| #2 | .2493 | .2073 | .2429 | .2599 | .2417 | .2465 | .2467 | .2515 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA3 Acquired: 9/7/2010 15:49:50 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.580** | **.2494** | **.2530** | **.3063** | **.2463** | **.2434** | **.2513** | **.2492** |
| Stddev | .034 | .0033 | .0004 | .0202 | .0002 | .0006 | .0018 | .0000 |
| %RSD | 1.327 | 1.313 | .1441 | 6.610 | .0958 | .2316 | .6971 | .0082 |
| #1 | 2.604 | .2517 | .2533 | .2920 | .2461 | .2430 | .2500 | .2492 |
| #2 | 2.556 | .2471 | .2528 | .3206 | .2465 | .2438 | .2525 | .2492 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0038** | **.1533** | **.2419** | **.2522** | **-.0013** | **.00002** |
| Stddev | .0019 | .0245 | .0004 | .0000 | .0006 | .00027 |
| %RSD | 48.24 | 15.98 | .1840 | .0142 | 44.12 | 1262.1 |
| #1 | -.0025 | .1706 | .2416 | .2522 | -.0009 | -.00017 |
| #2 | -.0051 | .1360 | .2422 | .2523 | -.0017 | .00021 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5206.4 | 107910. | 3907.6 | 1179.7 |
| Stddev | 6.8 | 226. | 19.9 | 4.8 |
| %RSD | .13069 | .20946 | .50838 | .40973 |
| #1 | 5211.2 | 107750. | 3921.6 | 1183.1 |
| #2 | 5201.6 | 108070. | 3893.5 | 1176.3 |

Sample Name: CCVB3 Acquired: 9/7/2010 15:52:38 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.032** | **10.11** | **.0011** | **1.025** | **9.993** | **.00001** | **-.0072** | **-.0002** |
| Stddev | .028 | .07 | .0019 | .003 | .014 | .00002 | .0011 | .0000 |
| %RSD | .4042 | .6466 | 171.4 | .2485 | .1428 | 283.93 | 15.18 | 22.07 |
| #1 | 7.012 | 10.06 | -.0002 | 1.023 | 10.00 | .00002 | -.0065 | -.0001 |
| #2 | 7.052 | 10.16 | .0025 | 1.027 | 9.983 | -.00001 | -.0080 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **9.807** | **9.593** | **.0004** | **.0001** | **.0116** | **.0007** | **9.882** |
| Stddev | .0000 | .018 | .035 | .0002 | .0001 | .0001 | .0000 | .050 |
| %RSD | 1.943 | .1785 | .3681 | 36.54 | 89.12 | .9029 | 1.963 | .5077 |
| #1 | .0006 | 9.820 | 9.568 | .0003 | .0002 | .0115 | .0007 | 9.917 |
| #2 | .0006 | 9.795 | 9.618 | .0006 | .0000 | .0116 | .0007 | 9.846 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0011** | **9.510** | **9.431** | **10.25** | **.9648** | **.9934** | **-.0001** | **.0076** |
| Stddev | .0001 | .000 | .028 | .01 | .0001 | .0081 | .0002 | .0001 |
| %RSD | 6.030 | .0047 | .2950 | .1131 | .0064 | .8145 | 160.0 | .7213 |
| #1 | .0011 | 9.510 | 9.451 | 10.24 | .9648 | .9992 | -.0002 | .0076 |
| #2 | .0010 | 9.510 | 9.412 | 10.25 | .9649 | .9877 | .0000 | .0077 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB3 Acquired: 9/7/2010 15:52:38 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.32** | **-.0018** | **.0007** | **10.41** | **.0000** | **.0025** | **-.0004** | **-.0003** |
| Stddev | .02 | .0001 | .0007 | .03 | .000 | .0002 | .0001 | .0000 |
| %RSD | .2330 | 3.712 | 101.6 | .2801 | 525.5 | 8.239 | 11.74 | 10.44 |
| #1 | 10.34 | -.0017 | .0002 | 10.39 | .0001 | .0026 | -.0004 | -.0003 |
| #2 | 10.30 | -.0018 | .0012 | 10.43 | -.0002 | .0023 | -.0005 | -.0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.938** | **10.71** | **.0001** | **-.0030** | **1.034** | **.98318** |
| Stddev | .010 | .11 | .0002 | .0017 | .001 | .00169 |
| %RSD | .1012 | 1.035 | 143.6 | 56.61 | .0900 | .17171 |
| #1 | 9.931 | 10.78 | .0000 | -.0018 | 1.033 | .98437 |
| #2 | 9.945 | 10.63 | .0003 | -.0042 | 1.035 | .98199 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5232.1 | 107530. | 3922.2 | 1175.2 |
| Stddev | 12.9 | 167. | 3.2 | 4.1 |
| %RSD | .24717 | .15561 | .08236 | .34701 |
| #1 | 5241.3 | 107410. | 3919.9 | 1178.1 |
| #2 | 5223.0 | 107650. | 3924.5 | 1172.3 |

Sample Name: CCB3 Acquired: 9/7/2010 15:56:37 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | **.0021** | **-.0019** | **.0024** | **-.0016** | **-.00004** | **-.0069** | **.0000** |
| Stddev | .0002 | .0012 | .0009 | .0023 | .0001 | .00002 | .0006 | .0000 |
| %RSD | 21.27 | 55.02 | 44.92 | 97.55 | 7.581 | 45.168 | 8.147 | 493.3 |
| #1 | .0011 | .0013 | -.0026 | .0040 | -.0015 | -.00003 | -.0073 | .0000 |
| #2 | .0008 | .0029 | -.0013 | .0007 | -.0017 | -.00005 | -.0065 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0031** | **.0006** | **.0000** | **.0001** | **.0002** | **.0005** | **.0068** |
| Stddev | .0001 | .0052 | .0000 | .0006 | .0005 | .0003 | .0008 | .0049 |
| %RSD | 412.4 | 163.6 | 5.951 | 52280. | 376.7 | 187.6 | 162.8 | 72.85 |
| #1 | .0001 | .0005 | .0005 | .0004 | .0004 | .0004 | .0011 | .0102 |
| #2 | -.0001 | -.0068 | .0006 | -.0004 | -.0002 | -.0001 | -.0001 | .0033 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **-.0039** | **.0010** | **.0022** | **.0000** | **-.0005** | **.0000** | **.0000** |
| Stddev | .0011 | .0143 | .0000 | .0005 | .0000 | .0023 | .000 | .0004 |
| %RSD | 339.1 | 368.5 | .3993 | 20.56 | 69.58 | 474.2 | 485.0 | 1021. |
| #1 | -.0011 | .0062 | .0010 | .0025 | .0001 | -.0021 | .0001 | -.0002 |
| #2 | .0005 | -.0140 | .0010 | .0019 | .0000 | .0011 | -.0001 | .0003 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB3 Acquired: 9/7/2010 15:56:37 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0635** | **.0000** | **.0003** | **.0614** | **-.0002** | **-.0003** | **.0001** | **-.0001** |
| Stddev | .0283 | .0014 | .0006 | .0303 | .0001 | .0002 | .0001 | .0001 |
| %RSD | 44.52 | 6022. | 239.7 | 49.34 | 55.32 | 52.51 | 73.56 | 52.25 |
| #1 | .0435 | -.0009 | .0007 | .0400 | -.0003 | -.0005 | .0001 | -.0002 |
| #2 | .0835 | .0010 | -.0002 | .0828 | -.0001 | -.0002 | .0002 | -.0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0016** | **.0370** | **.0000** | **.0024** | **-.0007** | **.00011** |
| Stddev | .0025 | .0099 | .000 | .0002 | .0006 | .00011 |
| %RSD | 161.1 | 26.87 | 1297. | 8.516 | 81.66 | 95.437 |
| #1 | -.0002 | .0300 | .0000 | .0026 | -.0003 | .00004 |
| #2 | .0033 | .0440 | .0000 | .0023 | -.0012 | .00019 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5299.5 | 109520. | 4004.1 | 1192.9 |
| Stddev | 10.5 | 85. | 29.3 | .6 |
| %RSD | .19781 | .07777 | .73297 | .04975 |
| #1 | 5306.9 | 109460. | 4024.8 | 1193.3 |
| #2 | 5292.1 | 109580. | 3983.3 | 1192.5 |

Sample Name: K1008435-001S Acquired: 9/7/2010 16:01:02 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.010** | **.4838** | **.9602** | **2.009** | **.04914** | **.9067** | **.0478** | **.0482** |
| #1 | 2.007 | .4810 | .9619 | 2.016 | .04925 | .9085 | .0478 | .0482 |
| #2 | 2.014 | .4865 | .9585 | 2.003 | .04904 | .9048 | .0478 | .0483 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **11.91** | **11.67** | **.1963** | **.4888** | **.2468** | **.2561** | **1.053** | **.4822** |
| #1 | 11.95 | 11.77 | .1969 | .4875 | .2468 | .2556 | 1.055 | .4823 |
| #2 | 11.87 | 11.57 | .1957 | .4901 | .2468 | .2566 | 1.051 | .4822 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **10.92** | **.4933** | **.9145** | **.4864** | F **10.49** | **.9043** | **.0504** | F **11.82** |
| #1 | 10.95 | .4948 | .9131 | .4869 | 10.47 | .9050 | .0509 | 11.80 |
| #2 | 10.89 | .4918 | .9159 | .4858 | 10.51 | .9037 | .0500 | 11.84 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **.4933** | **.4880** | **.4872** | **.1357** | **4.305** | **.0005** | **.9291** |
| #1 | .0006 | .4942 | .4874 | .4876 | .1374 | 4.302 | .0004 | .9303 |
| #2 | .0002 | .4924 | .4886 | .4867 | .1341 | 4.307 | .0006 | .9278 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | ppm | ppm |
| Avg | **.0030** | **.01549** |
| #1 | .0027 | .01563 |
| #2 | .0033 | .01536 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5166.3 | 106650. | 3736.6 | 1167.9 |
| #1 | 5174.6 | 106600. | 3722.8 | 1169.2 |
| #2 | 5158.0 | 106690. | 3750.3 | 1166.5 |

Sample Name: K1008435-001S Acquired: 9/7/2010 16:04:07 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A Si

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0242** | **.0242** | **-.0015** | **.0011** | F **-.0013** | **-.00008** | F **-.0054** | **.0001** |
| #1 | .0242 | .0248 | -.0002 | -.0009 | -.0023 | -.00009 | -.0057 | .0000 |
| #2 | .0242 | .0236 | -.0029 | .0030 | -.0003 | -.00008 | -.0051 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **1.748** | **1.762** | F **-.0002** | **.0001** | **.0104** | **.0105** | **.0646** |
| #1 | .0002 | 1.747 | 1.761 | -.0001 | .0000 | .0101 | .0104 | .0639 |
| #2 | .0001 | 1.749 | 1.762 | -.0003 | .0003 | .0107 | .0106 | .0653 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0027** | **.6949** | **.7447** | **.0147** | **.0006** | **.0119** | **.2478** | **.0011** |
| #1 | .0038 | .6931 | .7423 | .0147 | .0007 | .0117 | .3025 | .0005 |
| #2 | .0015 | .6967 | .7471 | .0148 | .0004 | .0120 | .1931 | .0016 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | F **18.67** | **.0006** | **.0003** | F **.0008** | F **.0005** | **.1346** | **14.87** |
| #1 | -.0005 | 18.64 | .0008 | .0002 | .0009 | .0005 | .1344 | 14.91 |
| #2 | .0002 | 18.71 | .0004 | .0005 | .0007 | .0005 | .1349 | 14.83 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **-.0006** | **.0019** | **.01568** |
| #1 | .0005 | .0014 | .0033 | .01553 |
| #2 | .0005 | -.0027 | .0006 | .01584 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5159.7 | 107030. | 3944.7 | 1171.8 |
| #1 | 5157.5 | 106980. | 3938.0 | 1171.8 |
| #2 | 5161.9 | 107070. | 3951.5 | 1171.8 |

Sample Name: K1008694-001 Acquired: 9/7/2010 16:07:52 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0086** | F **.0132** | **-.0031** | **.0029** | **.0037** | **-.00004** | F **-.0093** | **.0000** |
| #1 | .0087 | .0138 | -.0051 | .0046 | .0040 | -.00007 | -.0089 | .0000 |
| #2 | .0085 | .0126 | -.0012 | .0013 | .0035 | -.00002 | -.0098 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **20.18** | F **-.0002** | **.0000** | **.0004** | **.0004** | **.0320** | **.0043** |
| #1 | .0000 | 20.12 | -.0003 | -.0005 | .0008 | .0001 | .0330 | .0036 |
| #2 | .0001 | 20.24 | -.0002 | .0006 | .0000 | .0008 | .0309 | .0049 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.797** | **8.543** | **.0215** | **.0004** | **.0128** | **3.330** | **.0010** | **.0006** |
| #1 | 7.864 | 8.538 | .0216 | .0003 | .0128 | 3.293 | -.0001 | .0000 |
| #2 | 7.730 | 8.548 | .0214 | .0004 | .0127 | 3.368 | .0022 | .0012 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **11.65** | **.0002** | **-.0002** | F **.0012** | F **.0009** | **.2324** | **15.99** | **-.0001** |
| #1 | 11.61 | -.0001 | -.0002 | .0014 | .0010 | .2311 | 15.96 | -.0002 |
| #2 | 11.70 | .0004 | -.0003 | .0011 | .0009 | .2338 | 16.02 | .0000 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0014** | **.0022** | **.08510** |
| #1 | .0007 | .0006 | .08456 |
| #2 | .0022 | .0038 | .08565 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5200.8 | 107600. | 3971.1 | 1172.2 |
| #1 | 5194.2 | 107320. | 3973.5 | 1171.9 |
| #2 | 5207.5 | 107880. | 3968.7 | 1172.4 |

Sample Name: K1008694-002 Acquired: 9/7/2010 16:11:13 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0076** | F **.0154** | **-.0036** | **.0032** | F **.0009** | **-.00008** | F **-.0024** | **.0000** |
| #1 | .0076 | .0157 | -.0030 | .0049 | .0010 | -.00008 | -.0028 | .0000 |
| #2 | .0076 | .0151 | -.0043 | .0015 | .0008 | -.00007 | -.0021 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **16.99** | F **.0001** | **.0000** | **.0206** | **.0212** | F **.0199** | **.0048** |
| #1 | .0002 | 16.97 | .0000 | .0002 | .0209 | .0205 | .0203 | .0043 |
| #2 | .0002 | 17.01 | .0003 | -.0003 | .0203 | .0220 | .0196 | .0053 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.476** | **6.935** | **.0008** | **.0003** | **.0170** | **2.810** | **.0003** | **.0002** |
| #1 | 6.469 | 6.944 | .0008 | .0002 | .0171 | 2.808 | -.0004 | -.0001 |
| #2 | 6.484 | 6.926 | .0008 | .0004 | .0168 | 2.811 | .0009 | .0006 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.591** | **.0000** | **.0050** | F **.0036** | F **.0035** | **.2532** | **21.46** | **.0005** |
| #1 | 6.570 | .0000 | .0051 | .0036 | .0034 | .2497 | 21.47 | .0005 |
| #2 | 6.611 | .0001 | .0050 | .0035 | .0035 | .2567 | 21.46 | .0004 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0023** | **.0047** | **.05961** |
| #1 | .0038 | .0025 | .05969 |
| #2 | .0009 | .0068 | .05953 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5170.1** | **106980.** | **3894.3** | **1166.6** |
| #1 | 5165.9 | 107000. | 3892.4 | 1167.7 |
| #2 | 5174.4 | 106960. | 3896.2 | 1165.4 |

Sample Name: K1008694-003 Acquired: 9/7/2010 16:14:24 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0058** | F **.0105** | **-.0024** | **.0026** | **.0063** | **-.00007** | F **-.0080** | **.0000** |
| #1 | .0058 | .0068 | -.0016 | .0018 | .0061 | -.00009 | -.0090 | .0000 |
| #2 | .0059 | .0141 | -.0032 | .0034 | .0065 | -.00005 | -.0071 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **17.97** | F **-.0004** | **.0000** | **.0068** | **.0075** | F **.0077** | **.0053** |
| #1 | .0000 | 17.94 | -.0002 | -.0003 | .0066 | .0076 | .0063 | .0055 |
| #2 | .0001 | 17.99 | -.0006 | .0003 | .0070 | .0075 | .0091 | .0051 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **8.192** | **8.856** | **.0297** | **.0003** | **.0100** | **3.175** | **.0013** | **.0007** |
| #1 | 8.186 | 8.840 | .0297 | .0004 | .0101 | 3.236 | .0025 | .0005 |
| #2 | 8.198 | 8.872 | .0296 | .0002 | .0099 | 3.113 | .0002 | .0010 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.75** | **.0001** | **.0002** | F **.0027** | F **.0023** | **.2153** | **13.76** | **-.0004** |
| #1 | 12.71 | -.0001 | .0000 | .0025 | .0023 | .2118 | 13.66 | -.0004 |
| #2 | 12.79 | .0002 | .0003 | .0030 | .0023 | .2187 | 13.85 | -.0005 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0008** | **.0009** | **.07572** |
| #1 | .0010 | .0006 | .07527 |
| #2 | .0006 | .0013 | .07618 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5202.5 | 107340. | 3912.5 | 1172.2 |
| #1 | 5204.8 | 107410. | 3910.5 | 1174.0 |
| #2 | 5200.1 | 107270. | 3914.5 | 1170.4 |

Sample Name: K1008694-004 Acquired: 9/7/2010 16:17:44 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0115** | F **.0152** | **-.0020** | **.0040** | **.0050** | **-.00006** | F **-.0064** | **.0000** |
| #1 | .0115 | .0164 | -.0030 | .0029 | .0052 | -.00016 | -.0066 | .0000 |
| #2 | .0114 | .0140 | -.0010 | .0050 | .0049 | .00004 | -.0062 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **10.83** | **10.59** | F **-.0001** | **-.0001** | **.0016** | **.0014** | F **.0179** |
| #1 | .0002 | 10.81 | 10.53 | -.0001 | -.0002 | .0016 | .0013 | .0184 |
| #2 | .0002 | 10.85 | 10.64 | -.0001 | .0000 | .0017 | .0015 | .0174 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0026** | **5.594** | **6.072** | **.0290** | **.0003** | **.0103** | **2.288** | **.0005** |
| #1 | .0015 | 5.586 | 6.069 | .0290 | .0002 | .0104 | 2.336 | .0020 |
| #2 | .0038 | 5.601 | 6.075 | .0290 | .0004 | .0103 | 2.239 | -.0011 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **7.672** | **.0000** | **.0082** | F **.0011** | F **.0009** | **.1978** | **14.28** |
| #1 | .0003 | 7.693 | .0001 | .0085 | .0010 | .0009 | .1941 | 14.33 |
| #2 | -.0001 | 7.651 | -.0001 | .0079 | .0012 | .0009 | .2014 | 14.22 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0018** | **.0015** | **.04668** |
| #1 | -.0004 | .0015 | -.0001 | .04674 |
| #2 | -.0001 | .0021 | .0031 | .04663 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5233.4 | 108160. | 3973.4 | 1183.0 |
| #1 | 5242.6 | 107950. | 3986.1 | 1187.4 |
| #2 | 5224.2 | 108380. | 3960.7 | 1178.6 |

Sample Name: K1008694-005 Acquired: 9/7/2010 16:20:56 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0218** | **.0203** | **-.0007** | **.0010** | F **-.0008** | **-.00007** | F **-.0069** | **.0000** |
| #1 | .0217 | .0171 | -.0025 | .0004 | .0000 | -.00002 | -.0069 | .0000 |
| #2 | .0219 | .0235 | .0011 | .0017 | -.0017 | -.00013 | -.0069 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **2.007** | **2.028** | F **.0004** | **.0001** | **.0241** | **.0250** | **.0726** |
| #1 | .0000 | 2.014 | 2.034 | .0001 | .0002 | .0242 | .0248 | .0743 |
| #2 | -.0001 | 2.000 | 2.023 | .0008 | -.0001 | .0240 | .0253 | .0710 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0021** | **.7444** | **.8032** | **.0160** | **-.0005** | **.0036** | **.3690** | **-.0010** |
| #1 | .0022 | .7468 | .8073 | .0160 | -.0005 | .0036 | .3801 | .0001 |
| #2 | .0020 | .7420 | .7992 | .0161 | -.0005 | .0035 | .3580 | -.0022 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **4.408** | **-.0005** | **.0005** | F **.0019** | F **.0016** | **.1239** | **4.729** |
| #1 | .0002 | 4.421 | -.0004 | .0005 | .0021 | .0015 | .1220 | 4.723 |
| #2 | -.0001 | 4.396 | -.0006 | .0006 | .0017 | .0017 | .1258 | 4.735 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **.0008** | **-.0001** | **.01639** |
| #1 | .0003 | .0014 | .0016 | .01662 |
| #2 | .0004 | .0003 | -.0018 | .01617 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5280.3 | 109570. | 3956.5 | 1204.7 |
| #1 | 5295.5 | 109700. | 3953.2 | 1205.1 |
| #2 | 5265.1 | 109450. | 3959.8 | 1204.3 |

FWS 9/8/10

Sample Name: K1008691-001 Acquired: 9/7/2010 16:23:52 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0081** | F **.0087** | **-.0012** | **.0029** | **.0087** | **.00000** | F **-.0050** | **.0000** |
| #1 | .0082 | .0084 | -.0023 | .0021 | .0095 | -.00003 | -.0046 | .0000 |
| #2 | .0080 | .0091 | -.0001 | .0036 | .0079 | .00002 | -.0053 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **13.44** | **13.05** | F **-.0004** | **-.0002** | **.0027** | **.0016** | **.0220** |
| #1 | .0001 | 13.43 | 13.10 | -.0001 | -.0003 | .0025 | .0007 | .0243 |
| #2 | .0002 | 13.44 | 13.00 | -.0008 | -.0001 | .0029 | .0026 | .0196 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0029** | **5.768** | **6.048** | **.0543** | **.0003** | **.0110** | **2.216** | **.0014** |
| #1 | .0022 | 5.769 | 6.037 | .0542 | .0003 | .0109 | 2.329 | .0017 |
| #2 | .0036 | 5.767 | 6.059 | .0543 | .0004 | .0111 | 2.104 | .0011 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | **7.646** | **.0002** | **.0052** | F **.0018** | F **.0018** | **.2366** | **13.20** |
| #1 | .0021 | 7.610 | -.0001 | .0054 | .0019 | .0018 | .2399 | 13.12 |
| #2 | -.0006 | 7.682 | .0004 | .0051 | .0017 | .0018 | .2333 | 13.27 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0014** | **.0018** | **.05640** |
| #1 | -.0001 | .0003 | .0012 | .05630 |
| #2 | -.0002 | .0025 | .0023 | .05651 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5162.4 | 107280. | 3834.2 | 1173.4 |
| #1 | 5175.9 | 107190. | 3821.2 | 1178.1 |
| #2 | 5148.8 | 107360. | 3847.3 | 1168.8 |

WS 9/8/10

Sample Name: K1008697-002 Acquired: 9/7/2010 16:27:06 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0057** | F **.0073** | **-.0005** | **.0012** | **.0114** | **-.00009** | F **-.0066** | **.0000** |
| #1 | .0057 | .0089 | -.0013 | .0002 | .0116 | -.00011 | -.0068 | .0000 |
| #2 | .0057 | .0057 | .0003 | .0023 | .0112 | -.00006 | -.0065 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **14.05** | **13.68** | F **-.0002** | **.0000** | **.0031** | **.0023** | **.0300** |
| #1 | .0003 | 14.08 | 13.72 | .0000 | .0002 | .0032 | .0027 | .0291 |
| #2 | .0001 | 14.02 | 13.63 | -.0004 | -.0002 | .0030 | .0019 | .0309 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0045** | **5.744** | **5.980** | **.0410** | **.0000** | **.0132** | **2.077** | **.0000** |
| #1 | .0042 | 5.745 | 5.989 | .0410 | -.0001 | .0132 | 2.117 | .0015 |
| #2 | .0049 | 5.744 | 5.971 | .0409 | .0002 | .0133 | 2.038 | -.0015 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **8.561** | **.0004** | **.0006** | F **.0007** | F **.0005** | **.2830** | **15.79** |
| #1 | .0004 | 8.542 | -.0002 | .0003 | .0007 | .0005 | .2821 | 15.82 |
| #2 | .0004 | 8.580 | .0009 | .0010 | .0007 | .0005 | .2838 | 15.76 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0005** | **-.0022** | **.06467** |
| #1 | -.0002 | .0003 | -.0039 | .06494 |
| #2 | -.0001 | .0008 | -.0004 | .06439 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5122.5 | 106160. | 3814.3 | 1162.9 |
| #1 | 5131.9 | 106060. | 3810.5 | 1166.1 |
| #2 | 5113.1 | 106260. | 3818.1 | 1159.7 |

WS 9/8/10

Sample Name: K1008691-003 Acquired: 9/7/2010 16:30:19 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0063** | F **.0113** | **-.0016** | **.0025** | **.0147** | **-.00003** | F **-.0095** | **.0000** |
| #1 | .0064 | .0126 | -.0016 | .0032 | .0143 | -.00003 | -.0089 | -.0001 |
| #2 | .0062 | .0100 | -.0015 | .0017 | .0151 | -.00002 | -.0101 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **12.61** | **12.33** | F **-.0001** | **.0001** | **.0013** | **.0011** | **.0788** |
| #1 | .0002 | 12.61 | 12.30 | .0002 | -.0002 | .0010 | .0016 | .0788 |
| #2 | .0001 | 12.60 | 12.36 | -.0004 | .0004 | .0015 | .0006 | .0788 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0056** | **6.024** | **6.261** | **.0845** | **.0003** | **.0180** | **2.189** | **.0015** |
| #1 | .0065 | 6.048 | 6.259 | .0844 | .0002 | .0179 | 2.257 | .0024 |
| #2 | .0046 | 6.000 | 6.264 | .0847 | .0003 | .0182 | 2.121 | .0005 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **7.599** | **-.0003** | **.0002** | F **.0018** | F **.0017** | **.3178** | **20.86** |
| #1 | .0003 | 7.627 | -.0011 | .0001 | .0018 | .0017 | .3159 | 20.84 |
| #2 | .0002 | 7.570 | .0005 | .0003 | .0018 | .0016 | .3198 | 20.88 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0011** | **.0024** | **.05913** |
| #1 | .0000 | .0023 | .0040 | .05922 |
| #2 | .0001 | .0000 | .0009 | .05904 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5112.1 | 105760. | 3806.3 | 1159.5 |
| #1 | 5117.3 | 105440. | 3803.4 | 1160.6 |
| #2 | 5106.9 | 106070. | 3809.1 | 1158.3 |

Sample Name: CCVA4 Acquired: 9/7/2010 16:33:30 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2453** | **.2475** | **.2463** | **.2571** | **.2495** | **.24150** | F **.2246** | **.2397** |
| Stddev | .0005 | .0005 | .0007 | .0006 | .0045 | .00101 | .0008 | .0008 |
| %RSD | .1841 | .1934 | .2657 | .2202 | 1.799 | .41757 | .3463 | .3271 |
| #1 | .2450 | .2478 | .2467 | .2575 | .2526 | .24222 | .2251 | .2391 |
| #2 | .2456 | .2471 | .2458 | .2567 | .2463 | .24079 | .2240 | .2402 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Fail | Chk Pass |
| Value | | | | | | | .2500 | |
| Range | | | | | | | -10.00% | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2473** | **.2410** | **.2456** | **.2444** | **.2508** | **.2394** | **.2455** | **.2455** |
| Stddev | .0002 | .0026 | .0017 | .0003 | .0015 | .0007 | .0004 | .0037 |
| %RSD | .0782 | 1.091 | .6873 | .1121 | .5971 | .2736 | .1773 | 1.515 |
| #1 | .2471 | .2391 | .2468 | .2442 | .2497 | .2389 | .2458 | .2481 |
| #2 | .2474 | .2428 | .2444 | .2446 | .2518 | .2398 | .2451 | .2428 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2476** | **.2274** | **.2436** | **.2561** | **.2395** | **.2463** | **.2458** | **.2509** |
| Stddev | .0026 | .0165 | .0015 | .0038 | .0005 | .0010 | .0003 | .0001 |
| %RSD | 1.062 | 7.255 | .6324 | 1.478 | .1982 | .3931 | .1273 | .0256 |
| #1 | .2457 | .2390 | .2446 | .2588 | .2392 | .2456 | .2456 | .2510 |
| #2 | .2494 | .2157 | .2425 | .2535 | .2399 | .2470 | .2461 | .2509 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA4 Acquired: 9/7/2010 16:33:30 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.507** | **.2502** | **.2514** | **.2708** | **.2456** | **.2430** | **.2511** | **.2479** |
| Stddev | .020 | .0003 | .0020 | .0016 | .0014 | .0010 | .0010 | .0005 |
| %RSD | .7873 | .1308 | .7815 | .5848 | .5676 | .4194 | .3897 | .2165 |
| #1 | 2.493 | .2500 | .2528 | .2697 | .2447 | .2423 | .2504 | .2475 |
| #2 | 2.521 | .2505 | .2500 | .2719 | .2466 | .2437 | .2518 | .2483 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0010** | **.1431** | **.2420** | **.2494** | **.0032** | **.00002** |
| Stddev | .0021 | .0151 | .0000 | .0039 | .0002 | .00026 |
| %RSD | 202.7 | 10.57 | .0075 | 1.550 | 5.598 | 1135.8 |
| #1 | .0025 | .1538 | .2420 | .2467 | .0031 | .00021 |
| #2 | -.0004 | .1324 | .2421 | .2521 | .0033 | -.00016 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5195.8 | 106680. | 3823.5 | 1174.1 |
| Stddev | 4.4 | 601. | 25.5 | 3.7 |
| %RSD | .08388 | .56319 | .66747 | .31274 |
| #1 | 5192.8 | 107110. | 3805.5 | 1176.7 |
| #2 | 5198.9 | 106260. | 3841.6 | 1171.5 |

Sample Name: CCVB4 Acquired: 9/7/2010 16:36:19 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.102** | **10.06** | **.0010** | **1.016** | **10.10** | **.00000** | **-.0141** | **-.0002** |
| Stddev | .029 | .02 | .0016 | .004 | .01 | .00009 | .0003 | .0000 |
| %RSD | .4136 | .1881 | 155.8 | .4166 | .1013 | 3727.4 | 1.934 | 6.740 |
| #1 | 7.082 | 10.05 | .0022 | 1.013 | 10.11 | .00006 | -.0143 | -.0002 |
| #2 | 7.123 | 10.07 | -.0001 | 1.019 | 10.09 | -.00006 | -.0139 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **9.914** | **9.713** | **.0000** | **.0001** | **.0120** | **.0002** | **9.910** |
| Stddev | .0001 | .009 | .139 | .0001 | .0006 | .0006 | .0008 | .008 |
| %RSD | 24.84 | .0934 | 1.429 | 149.1 | 622.1 | 4.654 | 517.6 | .0824 |
| #1 | .0005 | 9.920 | 9.614 | .0001 | .0005 | .0124 | -.0004 | 9.916 |
| #2 | .0007 | 9.907 | 9.811 | .0000 | -.0003 | .0116 | .0007 | 9.904 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0025** | **9.597** | **9.486** | **10.28** | **.9684** | **1.001** | **.0000** | **.0077** |
| Stddev | .0004 | .043 | .008 | .02 | .0019 | .005 | .000 | .0002 |
| %RSD | 15.51 | .4496 | .0868 | .1610 | .1988 | .4826 | 2264. | 3.083 |
| #1 | .0027 | 9.627 | 9.480 | 10.29 | .9670 | 1.004 | .0003 | .0075 |
| #2 | .0022 | 9.566 | 9.492 | 10.27 | .9697 | .9973 | -.0003 | .0079 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB4 Acquired: 9/7/2010 16:36:19 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.36** | **.0018** | **.0001** | **10.42** | **-.0005** | **.0023** | **-.0006** | **-.0002** |
| Stddev | .01 | .0007 | .0005 | .01 | .0003 | .0004 | .0002 | .0001 |
| %RSD | .0712 | 39.62 | 323.3 | .0844 | 53.58 | 17.63 | 35.50 | 43.82 |
| #1 | 10.35 | .0013 | -.0002 | 10.42 | -.0007 | .0026 | -.0007 | -.0001 |
| #2 | 10.36 | .0023 | .0005 | 10.41 | -.0003 | .0020 | -.0004 | -.0002 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.873** | **10.53** | **.0002** | **-.0014** | **1.035** | **.99722** |
| Stddev | .024 | .08 | .0001 | .0005 | .008 | .00367 |
| %RSD | .2445 | .8043 | 49.13 | 34.00 | .7977 | .36784 |
| #1 | 9.856 | 10.59 | .0002 | -.0011 | 1.041 | .99982 |
| #2 | 9.890 | 10.47 | .0001 | -.0018 | 1.029 | .99463 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5149.8 | 106030. | 3879.4 | 1157.5 |
| Stddev | 2.7 | 394. | 5.4 | 2.8 |
| %RSD | .05250 | .37169 | .14048 | .24123 |
| #1 | 5151.8 | 105750. | 3883.3 | 1155.5 |
| #2 | 5147.9 | 106310. | 3875.6 | 1159.4 |

Sample Name: CCB4 Acquired: 9/7/2010 16:40:17 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0013** | **-.0010** | **-.0022** | **.0029** | **-.0011** | **-.00006** | F **-.0136** | **.0001** |
| Stddev | .0002 | .0028 | .0018 | .0006 | .0011 | .00006 | .0016 | .0001 |
| %RSD | 17.13 | 268.6 | 83.62 | 21.62 | 97.47 | 104.19 | 11.84 | 90.32 |
| #1 | .0014 | -.0030 | -.0009 | .0033 | -.0019 | -.00002 | -.0124 | .0000 |
| #2 | .0011 | .0009 | -.0034 | .0024 | -.0003 | -.00010 | -.0147 | .0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass |
| High Limit | | | | | | | .0100 | |
| Low Limit | | | | | | | -.0100 | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0182** | **.0012** | **-.0001** | **.0001** | **.0004** | **.0007** | **.0056** |
| Stddev | .0001 | .0103 | .0001 | .0002 | .0004 | .0005 | .0002 | .0038 |
| %RSD | 397.2 | 56.70 | 6.394 | 156.0 | 372.5 | 125.3 | 33.53 | 68.07 |
| #1 | .0001 | -.0109 | .0011 | .0000 | -.0002 | .0000 | .0005 | .0082 |
| #2 | -.0001 | -.0255 | .0012 | -.0003 | .0004 | .0007 | .0008 | .0029 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0235** | **.0014** | **.0025** | **.0001** | **.0003** | **-.0002** | **.0000** |
| Stddev | .0008 | .0047 | .0001 | .0014 | .0000 | .0002 | .0005 | .0002 |
| %RSD | 624.4 | 19.82 | 7.320 | 57.02 | 9.457 | 94.10 | 220.5 | 388.4 |
| #1 | -.0007 | -.0202 | .0013 | .0015 | .0001 | .0004 | .0001 | .0002 |
| #2 | .0004 | -.0268 | .0014 | .0035 | .0001 | .0001 | -.0005 | -.0001 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB4 Acquired: 9/7/2010 16:40:17 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0582** | **-.0005** | **.0001** | **.0605** | **.0000** | **-.0001** | **.0002** | **-.0002** |
| Stddev | .0220 | .0007 | .0003 | .0085 | .001 | .0003 | .0003 | .0000 |
| %RSD | 37.73 | 158.4 | 277.0 | 13.98 | 4794. | 324.7 | 101.7 | 20.86 |
| #1 | .0738 | .0001 | -.0001 | .0665 | .0005 | .0001 | .0001 | -.0003 |
| #2 | .0427 | -.0010 | .0003 | .0545 | -.0006 | -.0003 | .0004 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0033** | **.0173** | **-.0002** | **.0002** | **-.0013** | **.00015** |
| Stddev | .0006 | .0115 | .0001 | .0033 | .0026 | .00028 |
| %RSD | 19.01 | 66.71 | 50.62 | 1704. | 195.1 | 194.10 |
| #1 | .0028 | .0091 | -.0002 | .0025 | -.0032 | .00035 |
| #2 | .0037 | .0255 | -.0003 | -.0021 | .0005 | -.00005 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5251.3 | 108760. | 3897.7 | 1181.9 |
| Stddev | 3.6 | 529. | 3.9 | .7 |
| %RSD | .06823 | .48670 | .09987 | .06106 |
| #1 | 5253.9 | 109130. | 3900.5 | 1182.4 |
| #2 | 5248.8 | 108380. | 3895.0 | 1181.4 |

7 ws 9/15/10

Sample Name: K1008691-004 Acquired: 9/7/2010 16:43:10 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0053** | F **.0028** | **-.0033** | **.0004** | **.0080** | **-.00007** | F **-.0068** | **.0000** |
| #1 | .0053 | -.0015 | -.0031 | .0005 | .0083 | .00000 | -.0075 | -.0001 |
| #2 | .0053 | .0071 | -.0035 | .0003 | .0076 | -.00014 | -.0060 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **14.56** | **14.06** | F **.0000** | **-.0004** | **.0006** | **.0002** | **.0608** |
| #1 | .0002 | 14.56 | 14.09 | .0001 | -.0001 | .0003 | .0003 | .0580 |
| #2 | .0000 | 14.56 | 14.03 | -.0002 | -.0007 | .0010 | .0001 | .0637 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0041** | **5.901** | **6.189** | **.0635** | **.0005** | **.0128** | **2.153** | **-.0006** |
| #1 | .0039 | 5.888 | 6.161 | .0635 | .0004 | .0130 | 2.174 | .0005 |
| #2 | .0043 | 5.914 | 6.217 | .0636 | .0005 | .0127 | 2.131 | -.0016 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **8.583** | **.0004** | **.0004** | F **.0036** | F **.0036** | **.3386** | **16.61** |
| #1 | -.0002 | 8.558 | .0002 | .0003 | .0036 | .0035 | .3393 | 16.59 |
| #2 | -.0009 | 8.608 | .0006 | .0006 | .0037 | .0036 | .3379 | 16.62 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0007** | **.0019** | **.06511** |
| #1 | .0001 | .0023 | .0035 | .06503 |
| #2 | -.0003 | -.0010 | .0003 | .06519 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5194.7 | 107040. | 3813.7 | 1173.1 |
| #1 | 5205.2 | 106780. | 3811.5 | 1176.4 |
| #2 | 5184.1 | 107290. | 3815.9 | 1169.8 |

Sample Name: RB Acquired: 9/7/2010 16:46:20 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | F **.0018** | **-.0009** | **.0013** | F **-.0023** | **-.00001** | F **-.0103** | **.0000** |
| #1 | .0006 | .0075 | .0017 | -.0011 | -.0017 | -.00001 | -.0114 | .0001 |
| #2 | .0003 | -.0038 | -.0035 | .0037 | -.0029 | -.00002 | -.0092 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0053** | **-.0001** | F **.0000** | **.0000** | **.0006** | **-.0007** | F **-.0014** |
| #1 | .0000 | -.0108 | -.0001 | .0001 | .0002 | .0001 | -.0001 | -.0017 |
| #2 | .0000 | .0003 | -.0001 | -.0001 | -.0003 | .0012 | -.0014 | -.0011 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0000** | F **.0028** | **-.0003** | **-.0003** | **-.0004** | F **.0853** | **-.0004** |
| #1 | .0001 | .0000 | .0038 | -.0003 | -.0001 | -.0004 | .0435 | .0004 |
| #2 | -.0003 | -.0001 | .0018 | -.0003 | -.0004 | -.0004 | .1272 | -.0011 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | F **.0628** | **-.0003** | **.0000** | F **.0001** | F **-.0002** | **-.0014** | **.0013** |
| #1 | .0008 | .0553 | -.0002 | -.0003 | .0000 | -.0002 | -.0025 | .0339 |
| #2 | .0006 | .0702 | -.0004 | .0003 | .0001 | -.0002 | -.0002 | -.0312 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0002** | **.0011** | **.00002** |
| #1 | -.0001 | .0000 | .0006 | -.00020 |
| #2 | .0001 | .0003 | .0015 | .00024 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5253.0 | 109080. | 3891.0 | 1183.0 |
| #1 | 5258.1 | 109560. | 3871.0 | 1181.8 |
| #2 | 5247.9 | 108610. | 3911.1 | 1184.2 |

Sample Name: K1008857-MB Acquired: 9/7/2010 16:48:47 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0018** | **.0024** | **-.0005** | **.0010** | **-.0027** | **-.00006** | **-.0112** | **-.0001** |
| #1 | .0019 | .0032 | .0000 | .0009 | -.0034 | -.00009 | -.0108 | -.0001 |
| #2 | .0018 | .0017 | -.0010 | .0011 | -.0020 | -.00003 | -.0117 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0070** | **.0112** | **.0000** | **.0001** | **.0012** | **.0003** | **.0020** |
| #1 | .0001 | .0007 | .0111 | -.0001 | .0003 | .0011 | -.0002 | -.0043 |
| #2 | -.0001 | .0133 | .0113 | .0002 | -.0001 | .0012 | .0007 | .0083 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.0006** | **.0010** | **-.0001** | **-.0004** | **-.0002** | **.0276** | **.0002** |
| #1 | .0009 | .0007 | .0015 | -.0002 | -.0006 | -.0002 | .0673 | .0006 |
| #2 | .0004 | .0005 | .0006 | -.0001 | -.0003 | -.0002 | -.0122 | -.0002 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0894** | **.0001** | **.0002** | **.0005** | **.0006** | **.0016** | **.0101** |
| #1 | -.0001 | .0862 | .0002 | -.0001 | .0005 | .0006 | .0016 | .0202 |
| #2 | -.0002 | .0927 | -.0001 | .0004 | .0006 | .0006 | .0017 | .0000 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0001** | **-.0003** | **.00034** |
| #1 | -.0002 | -.0019 | -.0008 | .00022 |
| #2 | -.0001 | .0021 | .0002 | .00047 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5208.2** | **108070.** | **3862.3** | **1180.0** |
| #1 | 5210.9 | 108140. | 3867.3 | 1183.9 |
| #2 | 5205.5 | 108010. | 3857.3 | 1176.1 |

Sample Name: LCSS Acquired: 9/7/2010 16:51:14 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **41.85** | **.3987** | **.4301** | **2.053** | **.27906** | **.4611** | **.4173** | **.4150** |
| #1 | 41.90 | .3982 | .4261 | 2.061 | .27937 | .4635 | .4158 | .4146 |
| #2 | 41.80 | .3993 | .4341 | 2.045 | .27875 | .4586 | .4187 | .4153 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **44.20** | **.6626** | **.8781** | **1.151** | **1.168** | **82.03** | **.4848** | **18.83** |
| #1 | 44.31 | .6681 | .8777 | 1.148 | 1.170 | 82.30 | .4819 | 18.83 |
| #2 | 44.09 | .6571 | .8786 | 1.154 | 1.166 | 81.75 | .4877 | 18.82 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.236** | **.2857** | **.9215** | **19.71** | **.8860** | **.3834** | **3.504** | **.6664** |
| #1 | 2.275 | .2856 | .9213 | 19.83 | .8890 | .3833 | 3.531 | .6645 |
| #2 | 2.197 | .2859 | .9216 | 19.60 | .8831 | .3836 | 3.477 | .6682 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.8293** | **1.319** | **1.351** | **3.862** | **13.89** | **2.130** | **1.175** | **.0438** |
| #1 | .8368 | 1.314 | 1.350 | 3.863 | 13.90 | 2.150 | 1.170 | .0472 |
| #2 | .8218 | 1.323 | 1.351 | 3.861 | 13.87 | 2.111 | 1.180 | .0403 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **.62129** |
| #1 | .62345 |
| #2 | .61914 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5415.0 | 111950. | 3913.2 | 1191.6 |
| #1 | 5416.5 | 111180. | 3905.0 | 1195.1 |
| #2 | 5413.4 | 112720. | 3921.5 | 1188.1 |

Sample Name: LCSW Acquired: 9/7/2010 16:55:03 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2 P

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0026** | F **.0034** | **-.0031** | **-.0002** | F **-.0016** | **-.00011** | F **-.0140** | **-.0001** |
| #1 | .0027 | .0030 | -.0038 | .0009 | -.0013 | -.00009 | -.0143 | -.0001 |
| #2 | .0024 | .0037 | -.0024 | -.0013 | -.0019 | -.00013 | -.0138 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0010** | **.0115** | F **.0004** | **-.0005** | **.0009** | **.0006** | F **.0029** |
| #1 | .0000 | .0035 | .0115 | .0004 | -.0008 | .0009 | .0012 | .0061 |
| #2 | .0000 | -.0054 | .0115 | .0004 | -.0001 | .0010 | .0000 | -.0003 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0013** | **.0008** | F **.0034** | **-.0001** | **-.0002** | **.0000** | F **-.0971** | **-.0006** |
| #1 | -.0007 | .0008 | .0030 | -.0001 | -.0003 | .0000 | -.0574 | -.0003 |
| #2 | -.0019 | .0008 | .0038 | -.0001 | -.0001 | .0000 | -.1368 | -.0008 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F **.0412** | **.0000** | **.0000** | F **.0009** | F **.0008** | **2.430** | **.0073** |
| #1 | .0005 | .0374 | .0000 | .0004 | .0010 | .0008 | 2.424 | .0235 |
| #2 | .0000 | .0450 | .0001 | -.0003 | .0007 | .0008 | 2.436 | -.0089 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0000** | **-.0005** | **.00022** |
| #1 | -.0002 | .0004 | -.0020 | .00026 |
| #2 | .0000 | -.0004 | .0010 | .00018 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5220.3 | 108330. | 3818.3 | 1190.2 |
| #1 | 5220.6 | 108350. | 3815.3 | 1188.3 |
| #2 | 5220.1 | 108310. | 3821.3 | 1192.2 |

Sample Name: K1008857-001 Acquired: 9/7/2010 16:57:28 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **33.98** | **.0132** | **.0106** | **.2950** | **.00157** | F **.0111** | **.0038** | **.0102** |
| #1 | 34.10 | .0140 | .0104 | .2944 | .00158 | .0102 | .0038 | .0102 |
| #2 | 33.86 | .0124 | .0109 | .2955 | .00155 | .0121 | .0039 | .0103 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **19.59** | **.1990** | **.0218** | **.4748** | **.4247** | F **76.57** | **.4122** | F **24.83** |
| #1 | 19.56 | .2001 | .0220 | .4747 | .4265 | 76.57 | .4134 | 24.85 |
| #2 | 19.61 | .1979 | .0217 | .4749 | .4228 | 76.57 | .4109 | 24.80 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.033** | **.0035** | **.0959** | **4.641** | **-.0021** | **.0049** | **7.034** | **.0883** |
| #1 | 1.035 | .0036 | .0957 | 4.701 | -.0020 | .0047 | 7.021 | .0881 |
| #2 | 1.032 | .0033 | .0961 | 4.582 | -.0022 | .0051 | 7.047 | .0885 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0971** | **1.023** | **1.019** | **4.312** | **9.880** | **1.282** | **-.0027** | **.0584** |
| #1 | .0974 | 1.020 | 1.017 | 4.303 | 9.899 | 1.284 | -.0026 | .0586 |
| #2 | .0967 | 1.025 | 1.020 | 4.322 | 9.861 | 1.280 | -.0028 | .0583 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **.11370** |
| #1 | .11340 |
| #2 | .11399 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5319.3 | 109400. | 4033.5 | 1181.9 |
| #1 | 5320.6 | 109460. | 4035.0 | 1183.0 |
| #2 | 5318.0 | 109330. | 4032.0 | 1180.8 |

Sample Name: K1008857-001D Acquired: 9/7/2010 17:01:18 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **35.97** | **.1150** | **.0105** | **.3153** | **.00175** | F **.0171** | **.0044** | **.0110** |
| #1 | 35.89 | .1154 | .0120 | .3137 | .00181 | .0179 | .0044 | .0109 |
| #2 | 36.04 | .1146 | .0090 | .3170 | .00169 | .0163 | .0044 | .0111 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **21.99** | **.2252** | **.0242** | **.4893** | **.4371** | F **80.61** | **.7422** | F **20.96** |
| #1 | 21.99 | .2247 | .0247 | .4878 | .4362 | 80.66 | .7403 | 20.99 |
| #2 | 21.98 | .2256 | .0236 | .4908 | .4380 | 80.55 | .7442 | 20.93 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.187** | **.0043** | **.1018** | **5.876** | **-.0047** | **.0051** | **8.974** | **.0980** |
| #1 | 1.188 | .0041 | .1020 | 5.893 | -.0038 | .0050 | 9.012 | .0984 |
| #2 | 1.186 | .0046 | .1016 | 5.859 | -.0057 | .0052 | 8.935 | .0976 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1031** | **1.074** | **1.079** | **4.224** | **10.54** | **1.284** | **.0007** | **.0704** |
| #1 | .1029 | 1.070 | 1.077 | 4.218 | 10.51 | 1.285 | .0017 | .0709 |
| #2 | .1034 | 1.077 | 1.081 | 4.230 | 10.58 | 1.283 | -.0004 | .0698 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **.11992** |
| #1 | .12008 |
| #2 | .11976 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5356.9 | 110270. | 4003.2 | 1188.5 |
| #1 | 5361.5 | 109980. | 4000.0 | 1190.7 |
| #2 | 5352.4 | 110570. | 4006.4 | 1186.3 |

Sample Name: K1008857-001L Acquired: 9/7/2010 17:05:07 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2*1/5

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.730** | **.0023** | **.0027** | **.0612** | **.00035** | F **-.0072** | **.0008** | **.0022** |
| #1 | 6.735 | .0010 | .0031 | .0615 | .00033 | -.0066 | .0008 | .0021 |
| #2 | 6.725 | .0037 | .0023 | .0608 | .00036 | -.0078 | .0008 | .0023 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.072** | **4.053** | **.0413** | **.0050** | **.0998** | **.0868** | F **16.12** | **.0871** |
| #1 | 4.077 | 4.063 | .0412 | .0048 | .0998 | .0866 | 16.11 | .0877 |
| #2 | 4.067 | 4.043 | .0414 | .0053 | .0998 | .0871 | 16.12 | .0865 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.660** | **5.037** | **.2157** | **.0004** | **.0203** | **1.071** | **-.0003** | **.0009** |
| #1 | 4.654 | 5.031 | .2155 | .0002 | .0204 | 1.021 | -.0014 | .0007 |
| #2 | 4.666 | 5.043 | .2158 | .0007 | .0203 | 1.122 | .0009 | .0011 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.480** | **.0187** | **.0206** | **.2169** | **.2160** | **.8965** | **2.035** | **.2645** |
| #1 | 1.477 | .0178 | .0205 | .2172 | .2157 | .8969 | 2.026 | .2639 |
| #2 | 1.484 | .0195 | .0207 | .2165 | .2163 | .8961 | 2.045 | .2652 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0022** | **.0115** | **.02356** |
| #1 | -.0008 | .0090 | .02358 |
| #2 | .0052 | .0141 | .02355 |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5272.2 | 108900. | 3952.8 | 1185.4 |
| #1 | 5274.3 | 108970. | 3952.8 | 1183.2 |
| #2 | 5270.1 | 108840. | 3952.9 | 1187.5 |

Sample Name: K1008857-001S Acquired: 9/7/2010 17:08:11 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **47.09** | **.3318** | **.4797** | **2.305** | **.04900** | **.4512** | **.0477** | **.0561** |
| #1 | 46.98 | .3298 | .4774 | 2.297 | .04904 | .4500 | .0477 | .0560 |
| #2 | 47.21 | .3338 | .4821 | 2.312 | .04896 | .4523 | .0477 | .0563 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **22.06** | **.4130** | **.4992** | **.6266** | **.5702** | F **94.71** | **.9450** | F **28.20** |
| #1 | 21.98 | .4128 | .4995 | .6258 | .5696 | 94.59 | .9451 | 28.08 |
| #2 | 22.15 | .4132 | .4990 | .6273 | .5708 | 94.82 | .9449 | 28.31 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.745** | **.4370** | **.5718** | F **12.25** | **.4185** | **.0526** | F 12.68 | **2.475** |
| #1 | 1.749 | .4367 | .5723 | 12.16 | .4167 | .0525 | 12.65 | 2.467 |
| #2 | 1.742 | .4374 | .5713 | 12.33 | .4202 | .0527 | 12.70 | 2.483 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.5821** | **1.550** | **1.536** | **7.156** | **10.34** | **1.508** | .4487 | **.0888** |
| #1 | .5829 | 1.547 | 1.533 | 7.143 | 10.26 | 1.511 | .4470 | .0907 |
| #2 | .5814 | 1.552 | 1.538 | 7.170 | 10.42 | 1.505 | .4503 | .0869 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **2.5542** |
| #1 | 2.5469 |
| #2 | 2.5614 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5336.7 | 109920. | 3940.5 | 1176.8 |
| #1 | 5331.1 | 109760. | 3936.7 | 1176.7 |
| #2 | 5342.3 | 110070. | 3944.3 | 1176.9 |

Sample Name: K1008857-002 Acquired: 9/7/2010 17:11:57 Type: Unk
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 090710A 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **36.65** | **.0139** | **.0105** | **.5117** | **.00191** | F **.0025** | **.0118** | **.0173** |
| #1 | 36.72 | .0162 | .0088 | .5156 | .00188 | .0016 | .0117 | .0172 |
| #2 | 36.58 | .0116 | .0123 | .5079 | .00194 | .0034 | .0118 | .0173 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **10.94** | **10.84** | **.3939** | **.0282** | **.5113** | **.4733** | F **68.70** | **1.075** |
| #1 | 11.01 | 10.91 | .3934 | .0283 | .5111 | .4750 | 69.10 | 1.074 |
| #2 | 10.87 | 10.76 | .3943 | .0282 | .5114 | .4715 | 68.30 | 1.076 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.617** | F **10.52** | **2.891** | **.0034** | **.1150** | **2.791** | **-.0041** | **.0143** |
| #1 | 9.697 | 10.53 | 2.887 | .0033 | .1150 | 2.847 | -.0025 | .0146 |
| #2 | 9.536 | 10.51 | 2.895 | .0035 | .1150 | 2.734 | -.0057 | .0140 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.015** | **.2565** | **.1129** | **1.383** | **1.390** | **6.432** | **9.644** | **1.100** |
| #1 | 1.027 | .2554 | .1128 | 1.384 | 1.391 | 6.431 | 9.612 | 1.099 |
| #2 | 1.004 | .2575 | .1131 | 1.381 | 1.390 | 6.432 | 9.676 | 1.100 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **-.0083** | **.0487** | **.07286** |
| #1 | -.0060 | .0473 | .07262 |
| #2 | -.0106 | .0501 | .07310 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5437.6 | 112120. | 3945.1 | 1194.0 |
| #1 | 5441.8 | 112330. | 3918.0 | 1194.2 |
| #2 | 5433.4 | 111900. | 3972.3 | 1193.8 |

Sample Name: CCVA5 Acquired: 9/7/2010 17:15:52 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2450** | **.2406** | **.2448** | **.2564** | **.2448** | **.24427** | **.2323** | **.2416** |
| Stddev | .0007 | .0032 | .0033 | .0025 | .0013 | .00117 | .0021 | .0005 |
| %RSD | .3024 | 1.345 | 1.363 | .9823 | .5113 | .47986 | .9123 | .2093 |
| #1 | .2444 | .2428 | .2425 | .2582 | .2439 | .24510 | .2338 | .2413 |
| #2 | .2455 | .2383 | .2472 | .2546 | .2456 | .24344 | .2308 | .2420 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2463** | **.2338** | **.2435** | **.2423** | **.2472** | **.2421** | **.2478** | **.2478** |
| Stddev | .0004 | .0023 | .0011 | .0007 | .0011 | .0000 | .0006 | .0008 |
| %RSD | .1618 | 1.004 | .4545 | .2779 | .4548 | .0030 | .2383 | .3182 |
| #1 | .2460 | .2322 | .2428 | .2428 | .2465 | .2421 | .2482 | .2484 |
| #2 | .2466 | .2355 | .2443 | .2418 | .2480 | .2421 | .2473 | .2473 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2455** | **.2307** | **.2419** | **.2546** | **.2396** | **.2436** | **.2458** | **.2482** |
| Stddev | .0011 | .0111 | .0000 | .0011 | .0005 | .0022 | .0008 | .0011 |
| %RSD | .4517 | 4.823 | .0183 | .4316 | .2037 | .8979 | .3193 | .4544 |
| #1 | .2447 | .2229 | .2419 | .2538 | .2399 | .2421 | .2453 | .2474 |
| #2 | .2463 | .2386 | .2418 | .2553 | .2392 | .2452 | .2464 | .2490 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA5 Acquired: 9/7/2010 17:15:52 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.515** | **.2499** | **.2479** | **.3101** | **.2443** | **.2426** | **.2467** | **.2480** |
| Stddev | .003 | .0009 | .0000 | .0001 | .0016 | .0012 | .0014 | .0005 |
| %RSD | .0997 | .3540 | .0118 | .0179 | .6411 | .4766 | .5618 | .1942 |
| #1 | 2.517 | .2505 | .2479 | .3101 | .2432 | .2434 | .2457 | .2477 |
| #2 | 2.513 | .2493 | .2479 | .3102 | .2455 | .2418 | .2477 | .2483 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0040** | **.1526** | **.2418** | **.2449** | **.0002** | **-.00005** |
| Stddev | .0034 | .0003 | .0000 | .0029 | .0021 | .00004 |
| %RSD | 83.27 | .2148 | .0015 | 1.202 | 1353. | 95.556 |
| #1 | -.0017 | .1529 | .2418 | .2428 | -.0013 | -.00002 |
| #2 | -.0064 | .1524 | .2418 | .2470 | .0016 | -.00008 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5189.7 | 107740. | 3850.2 | 1181.9 |
| Stddev | 4.8 | 224. | 22.9 | 4.9 |
| %RSD | .09295 | .20788 | .59567 | .41117 |
| #1 | 5193.2 | 107900. | 3834.0 | 1185.4 |
| #2 | 5186.3 | 107590. | 3866.4 | 1178.5 |

Sample Name: CCVB5 Acquired: 9/7/2010 17:18:41 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.985** | **10.01** | **-.0006** | **1.003** | **9.895** | **.00003** | **-.0126** | **-.0001** |
| Stddev | .021 | .03 | .0004 | .006 | .005 | .00001 | .0000 | .0000 |
| %RSD | .3049 | .2755 | 75.90 | .6152 | .0466 | 32.161 | .1750 | 3.115 |
| #1 | 7.000 | 9.988 | -.0003 | .9990 | 9.892 | .00003 | -.0126 | -.0001 |
| #2 | 6.970 | 10.03 | -.0009 | 1.008 | 9.898 | .00004 | -.0126 | -.0001 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **9.732** | **9.447** | **.0005** | **-.0002** | **.0115** | **.0004** | **9.720** |
| Stddev | .0000 | .022 | .129 | .0002 | .0003 | .0002 | .0012 | .021 |
| %RSD | 7.965 | .2266 | 1.368 | 40.03 | 136.2 | 2.091 | 336.8 | .2114 |
| #1 | .0007 | 9.716 | 9.355 | .0006 | .0000 | .0117 | .0012 | 9.735 |
| #2 | .0006 | 9.748 | 9.538 | .0003 | -.0005 | .0114 | -.0005 | 9.706 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0011** | **9.454** | **9.396** | **10.08** | **.9585** | **.9839** | **-.0003** | **.0079** |
| Stddev | .0013 | .049 | .107 | .08 | .0011 | .0084 | .0001 | .0004 |
| %RSD | 115.7 | .5202 | 1.135 | .7830 | .1147 | .8581 | 26.64 | 5.190 |
| #1 | .0020 | 9.419 | 9.321 | 10.14 | .9593 | .9899 | -.0003 | .0082 |
| #2 | .0002 | 9.489 | 9.472 | 10.02 | .9577 | .9779 | -.0002 | .0076 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB5 Acquired: 9/7/2010 17:18:41 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.04** | **.0001** | **.0009** | **10.25** | **.0007** | **.0027** | **-.0001** | **-.0003** |
| Stddev | .14 | .0019 | .0001 | .08 | .0004 | .0004 | .0000 | .0000 |
| %RSD | 1.357 | 2073. | 13.63 | .8206 | 51.11 | 15.90 | 20.81 | 17.06 |
| #1 | 10.14 | .0014 | .0008 | 10.31 | .0009 | .0031 | -.0001 | -.0003 |
| #2 | 9.948 | -.0012 | .0010 | 10.19 | .0004 | .0024 | -.0001 | -.0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.848** | **10.35** | **.0004** | **-.0034** | **1.020** | **.98095** |
| Stddev | .015 | .04 | .0001 | .0010 | .013 | .00101 |
| %RSD | .1498 | .3493 | 16.27 | 28.40 | 1.298 | .10268 |
| #1 | 9.859 | 10.38 | .0004 | -.0041 | 1.029 | .98024 |
| #2 | 9.838 | 10.33 | .0005 | -.0028 | 1.011 | .98167 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5167.3 | 105930. | 3869.2 | 1163.9 |
| Stddev | 12.6 | 237. | 33.0 | 6.1 |
| %RSD | .24415 | .22361 | .85228 | .52765 |
| #1 | 5158.4 | 105760. | 3892.5 | 1159.6 |
| #2 | 5176.2 | 106090. | 3845.9 | 1168.3 |

Sample Name: CCB5 Acquired: 9/7/2010 17:22:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0020** | **.0022** | **-.0013** | **.0014** | **-.0015** | **-.00003** | F **-.0171** |
| Stddev | .0002 | .0007 | .0017 | .0029 | .0000 | .00001 | .0007 |
| %RSD | 8.233 | 29.96 | 127.8 | 203.4 | 2.111 | 24.688 | 3.976 |
| #1 | .0018 | .0018 | -.0025 | .0034 | -.0015 | -.00003 | -.0176 |
| #2 | .0021 | .0027 | -.0001 | -.0006 | -.0015 | -.00002 | -.0166 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | | | | | .0100 |
| Low Limit | | | | | | | -.0100 |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0001** | **-.0059** | **.0018** | **-.0002** | **.0001** | **.0004** |
| Stddev | .0001 | .0001 | .0161 | .0000 | .0002 | .0006 | .0001 |
| %RSD | 388.2 | 155.1 | 271.9 | 1.089 | 150.1 | 651.0 | 33.07 |
| #1 | .0001 | .0002 | .0054 | .0018 | .0000 | -.0003 | .0004 |
| #2 | .0000 | .0000 | -.0173 | .0018 | -.0003 | .0005 | .0003 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0025** | **.0001** | **-.0325** | **.0018** | **.0035** | **.0001** |
| Stddev | .0002 | .0054 | .0002 | .0074 | .0001 | .0039 | .0001 |
| %RSD | 94.88 | 217.5 | 154.5 | 22.66 | 5.826 | 109.9 | 50.19 |
| #1 | -.0003 | -.0013 | .0003 | -.0377 | .0019 | .0062 | .0001 |
| #2 | -.0001 | .0063 | .0000 | -.0273 | .0017 | .0008 | .0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB5 Acquired: 9/7/2010 17:22:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **-.0003** | **.0000** | **-.0899** | **.0005** | **.0000** | **.0609** |
| Stddev | .0003 | .0000 | .000 | .1923 | .0005 | .0005 | .0056 |
| %RSD | 82.45 | 2.655 | 19.86 | 214.0 | 96.85 | 1284. | 9.158 |
| #1 | -.0001 | -.0003 | .0000 | -.2259 | .0002 | .0004 | .0570 |
| #2 | -.0005 | -.0003 | .0000 | .0461 | .0009 | -.0003 | .0649 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.0002** | **-.0001** | **-.0002** | **.0012** | **.0093** | **.0001** |
| Stddev | .0002 | .0001 | .0000 | .0000 | .0006 | .0302 | .0002 |
| %RSD | 41.63 | 65.64 | 15.78 | 21.18 | 44.27 | 325.7 | 175.1 |
| #1 | .0007 | .0001 | -.0001 | -.0002 | .0009 | -.0121 | .0000 |
| #2 | .0004 | .0003 | -.0001 | -.0002 | .0016 | .0307 | .0003 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.0021** | **.0016** | F **.00023** |
| Stddev | .0009 | .0002 | .00015 |
| %RSD | 41.07 | 12.26 | 66.724 |
| #1 | .0027 | .0014 | .00012 |
| #2 | .0015 | .0017 | .00034 |
| Check ? | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | .00020 |
| Low Limit | | | -.00020 |

keep mmk 9/8/10

WS 9/8/10

Sample Name: CCB5 Acquired: 9/7/2010 17:22:39 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Jnits | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5158.8 | 106210. | 3864.6 | 1156.3 |
| Stddev | 21.7 | 196. | 19.8 | .3 |
| %RSD | .41986 | .18446 | .51312 | .02282 |
| | | | | |
| #1 | 5143.5 | 106070. | 3850.6 | 1156.1 |
| #2 | 5174.2 | 106350. | 3878.6 | 1156.5 |

Sample Name: CCB5 Acquired: 9/7/2010 17:25:54 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0019** | **.0001** | **.0002** | **.0047** | **-.0001** | **-.00007** | F **-.0179** |
| Stddev | .0000 | .0041 | .0031 | .0036 | .0000 | .00006 | .0002 |
| %RSD | .4758 | 4141. | 1874. | 77.86 | 12.69 | 85.541 | 1.369 |
| #1 | .0019 | -.0028 | -.0021 | .0021 | -.0001 | -.00003 | -.0180 |
| #2 | .0019 | .0030 | .0024 | .0073 | -.0001 | -.00011 | -.0177 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | | | | | .0100 |
| Low Limit | | | | | | | -.0100 |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0000** | **-.0028** | **.0036** | **-.0001** | **.0000** | **.0003** |
| Stddev | .0000 | .000 | .0146 | .0004 | .0001 | .001 | .0002 |
| %RSD | 77.40 | 4811. | 528.1 | 11.76 | 98.76 | 2541. | 61.19 |
| #1 | .0000 | .0001 | -.0131 | .0039 | .0000 | -.0004 | .0004 |
| #2 | .0000 | -.0001 | .0075 | .0033 | -.0001 | .0004 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

WS 9/18/10

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **.0056** | **.0003** | **.0132** | F **.0023** | **.0019** | **.0002** |
| Stddev | .0001 | .0029 | .0026 | .0162 | .0000 | .0036 | .0001 |
| %RSD | 16.83 | 52.43 | 943.8 | 123.1 | .3041 | 193.2 | 33.87 |
| #1 | -.0003 | .0035 | .0021 | .0246 | .0023 | .0044 | .0001 |
| #2 | -.0004 | .0076 | -.0015 | .0017 | .0023 | -.0007 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Fail | Chk Pass | Chk Pass |
| High Limit | | | | | .0020 | | |
| Low Limit | | | | | -.0020 | | |

Sample Name: CCB5 Acquired: 9/7/2010 17:25:54 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

WS 9/8/10

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0011** | **-.0001** | **.0003** | F **.1013** | **.0005** | **.0002** | **.0353** |
| Stddev | .0001 | .0001 | .0002 | .0355 | .0019 | .0003 | .0340 |
| %RSD | 8.464 | 138.2 | 73.65 | 35.01 | 362.3 | 133.1 | 96.34 |
| #1 | .0010 | .0000 | .0005 | .0762 | -.0008 | .0000 | .0113 |
| #2 | .0011 | -.0001 | .0002 | .1264 | .0019 | .0004 | .0594 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | .1000 | | | |
| Low Limit | | | | -.1000 | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0001** | **-.0001** | **-.0002** | **-.0002** | **.0219** | **.0000** |
| Stddev | .0005 | .0000 | .0001 | .0001 | .0009 | .0273 | .0000 |
| %RSD | 108.9 | 16.31 | 74.53 | 32.91 | 371.1 | 125.1 | 66.30 |
| #1 | .0001 | .0001 | -.0001 | -.0002 | -.0009 | .0412 | .0000 |
| #2 | .0009 | .0002 | .0000 | -.0001 | .0004 | .0025 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

WS 9/8/10

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **-.0002** | **.0018** | F **.00026** |
| Stddev | .0023 | .0011 | .00026 |
| %RSD | 1015. | 59.15 | 98.090 |
| #1 | .0014 | .0026 | .00008 |
| #2 | -.0019 | .0011 | .00045 |
| Check ? | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | .00020 |
| Low Limit | | | -.00020 |

Sample Name: CCB5 Acquired: 9/7/2010 17:25:54 Type: QC
Method: 2010C(v32) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| nt. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5230.4 | 107820. | 3920.0 | 1171.3 |
| Stddev | 15.8 | 229. | 11.7 | 6.5 |
| %RSD | .30202 | .21240 | .29725 | .55675 |
| | | | | |
| #1 | 5219.2 | 107660. | 3911.8 | 1166.7 |
| #2 | 5241.5 | 107980. | 3928.3 | 1175.9 |

Service Request # K1008857 1+2 Redigest (Ti)
Instrument ID# K-ICP-AES-03

# ICP-OES Data Review Form

| | Yes | No |
|---|---|---|
| 1. Standardization completed | ✓ | |
| 2. ICV within 10 % of true value | ✓ | |
| 3. ICB below MRL | ✓ | |
| 4. CRI standard analyzed. | ✓ | |
| 5. ICS standards within 20% of true value | ✓ | |
| 6. All preceding CCVs within 10 % of true value | ✓ | |
| 7. Following CCV within 10 % of true value | ✓ | |
| 8. Bracketing CCBs below MRL | ✓ | |
| 9. Method Blank below MRL | ✓ | |
| 10. MS-MSD or Dup-MS and LCS within CAS control limits | ✓ | |
| 11. All analytes within instrument linear range | ✓ | |
| 12. Adequate rinse out time allowed between samples to eliminate memory effect | ✓ | |

Comments:
StarLIMS Run # 217821 Saved under 092310BICP03
Report Cd2265, Cu3273, Zn2062.
NR LL Si, Sr.

Primary Review by [illegible] Date 9/24/10

Secondary Review by BC Date 9/27/10

Sample Name: BLK Acquired: 9/23/2010 18:18:38 Type: Cal
Method: 2010C Bi + S(v9) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0002** | **-106.5** | **10.62** | **4.723** | **.0170** | **-12.311** | **111.3** |
| Stddev | .0000 | 4.9 | 1.86 | .352 | .0001 | 8.156 | .2 |
| %RSD | 4.591 | 4.597 | 17.49 | 7.451 | .5607 | 66.253 | .2080 |
| #1 | .0002 | -103.0 | 11.94 | 4.474 | .0171 | -6.5435 | 111.1 |
| #2 | .0002 | -109.9 | 9.309 | 4.972 | .0170 | -18.078 | 111.5 |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0007** | **.0002** | **.0049** | **.0377** | **.0000** | **.0009** | **-.0047** |
| Stddev | .0004 | .0002 | .0015 | .0010 | .000 | .0001 | .0013 |
| %RSD | 61.76 | 102.9 | 30.49 | 2.597 | 340.4 | 12.48 | 27.42 |
| #1 | .0010 | .0001 | .0039 | .0370 | .0001 | .0008 | -.0056 |
| #2 | .0004 | .0004 | .0060 | .0384 | -.0001 | .0010 | -.0038 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **7.368** | **.0016** | **.0007** | **.0000** | **.0066** | R **11.60** | **.0001** |
| Stddev | 15.86 | .0003 | .0001 | .0007 | .0004 | .14 | .0000 |
| %RSD | 215.2 | 22.08 | 12.74 | 3490. | 6.257 | 1.205 | 38.89 |
| #1 | 18.58 | .0018 | .0008 | -.0005 | .0069 | 11.70 | .0001 |
| #2 | -3.845 | .0013 | .0007 | .0005 | .0063 | 11.50 | .0001 |

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0000** | **.0001** | **.0010** | **112.3** | **2.302** | **-48.40** | **34.06** |
| Stddev | .0000 | .0001 | .0001 | 23.8 | 1.835 | .93 | 7.81 |
| %RSD | 60.39 | 93.78 | 9.190 | 21.24 | 79.75 | 1.911 | 22.94 |
| #1 | .0000 | .0000 | .0009 | 129.1 | 3.599 | -49.05 | 39.58 |
| #2 | .0001 | .0002 | .0011 | 95.40 | 1.004 | -47.74 | 28.53 |

Sample Name: BLK Acquired: 9/23/2010 18:18:38 Type: Cal
Method: 2010C Bi + S(v9) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0012** | **.0006** | **.0049** | **10.93** | **4.059** | **149.2** | **.0018** |
| Stddev | .0001 | .0000 | .0010 | 1.01 | 2.187 | 1.8 | .0001 |
| %RSD | 8.065 | 5.754 | 21.14 | 9.268 | 53.89 | 1.177 | 7.152 |
| #1 | .0013 | .0007 | .0056 | 11.64 | 5.606 | 150.5 | .0019 |
| #2 | .0011 | .0006 | .0041 | 10.21 | 2.513 | 148.0 | .0017 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.0027** | **-46.59** | **-.00338** | **.0023** | **22.53** |
| Stddev | .0000 | 18.09 | .00017 | .0000 | .45 |
| %RSD | .7689 | 38.83 | 4.9118 | 1.309 | 2.015 |
| #1 | -.0027 | -59.39 | -.00326 | .0023 | 22.21 |
| #2 | -.0027 | -33.80 | -.00350 | .0023 | 22.85 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5701.3 | 117170. | 7096.8 | 1462.2 |
| Stddev | 4.3 | 953. | 34.0 | 6.7 |
| %RSD | .07468 | .81318 | .47882 | .45851 |
| #1 | 5698.3 | 117840. | 7120.8 | 1467.0 |
| #2 | 5704.4 | 116490. | 7072.8 | 1457.5 |

[illegible] 9/24/10

9/27/10

Sample Name: STD A Acquired: 9/23/2010 18:21:44 Type: Cal
Method: 2010C Bi + S(v9) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-96-C

| Elem | Al1670 | Sb2068 | Be2348 | B_2496 | Cd2144 | Cd2265 | Ca3933 | Cr2677 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.1450** | **498.3** | **58220.** | **4196.** | **12.08** | **2.759** | **5.480** | **.1165** |
| Stddev | .0013 | .4 | 260. | 20. | .04 | .004 | .041 | .0004 |
| %RSD | .9006 | .0823 | .44586 | .4724 | .3264 | .1303 | .7548 | .3636 |
| #1 | .1441 | 498.0 | 58036. | 4210. | 12.05 | 2.757 | 5.509 | .1162 |
| #2 | .1459 | 498.6 | 58403. | 4182. | 12.11 | 2.762 | 5.451 | .1168 |

| Elem | Co2307 | Cu2247 | Cu3273 | Pb2203 | Mg2795 | Mn2576 | Mn2605 | Mo2020 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.7886** | **1.748** | **12040.** | **.7657** | **6.753** | **.5212** | **.0200** | **.6224** |
| Stddev | .0009 | .000 | 60. | .0011 | .051 | .0023 | .0002 | .0020 |
| %RSD | .1112 | .0234 | .4955 | .1396 | .7615 | .4428 | .8127 | .3225 |
| #1 | .7880 | 1.748 | 12000. | .7665 | 6.789 | .5196 | .0201 | .6209 |
| #2 | .7892 | 1.747 | 12090. | .7650 | 6.716 | .5228 | .0198 | .6238 |

| Elem | Ni2216 | Se1960 | Ag3280 | Sn1899 | V_2924 | Zn2062 | Zn2138 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.9517** | **387.8** | **15580.** | **.5282** | **.1133** | **3.618** | **5096.** | **.4292** |
| Stddev | .0026 | .4 | 46. | .0020 | .0004 | .008 | 8. | .0003 |
| %RSD | .2764 | .1137 | .2973 | .3830 | .3393 | .2120 | .1527 | .0749 |
| #1 | .9498 | 388.1 | 15550. | .5267 | .1130 | 3.612 | 5091. | .4290 |
| #2 | .9535 | 387.5 | 15620. | .5296 | .1136 | 3.623 | 5102. | .4294 |

| Elem | Tl1908 |
|---|---|
| Units | Cts/S |
| Avg | **.4204** |
| Stddev | .0007 |
| %RSD | .1720 |
| #1 | .4199 |
| #2 | .4209 |

Sample Name: STD A Acquired: 9/23/2010 18:21:44 Type: Cal
Method: 2010C Bi + S(v9) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-96-C

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5749.5 | 117870. | 7144.2 | 1481.6 |
| Stddev | 9.4 | 208. | 23.0 | 2.0 |
| %RSD | .16348 | .17680 | .32168 | .13424 |
| | | | | |
| #1 | 5756.1 | 117720. | 7128.0 | 1483.0 |
| #2 | 5742.9 | 118020. | 7160.5 | 1480.2 |

Sample Name: STD B Acquired: 9/23/2010 18:24:29 Type: Cal
Method: 2010C Bi + S(v9) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-84-B

| Elem | Al3944 | As1890 | Ba4554 | Ca3158 | Fe2599 | Mg2790 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **120500.** | **1469.** | **119.0** | **4.301** | **6.165** | **1.024** |
| Stddev | 194. | 6. | 1.8 | .022 | .029 | .005 |
| %RSD | .1613 | .3797 | 1.509 | .5125 | .4620 | .4910 |
| #1 | 120300. | 1465. | 117.7 | 4.285 | 6.145 | 1.020 |
| #2 | 120600. | 1473. | 120.3 | 4.316 | 6.185 | 1.028 |

| Elem | Mg2852 | K_7664 | Na5895 | P_2149 | Si2516 | Li6707 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **90160.** | **9946.** | **34510.** | **12870.** | **12170.** | **26180.** |
| Stddev | 496. | 93. | 192. | 23. | 89. | 16. |
| %RSD | .5501 | .9312 | .5573 | .1793 | .7349 | .0600 |
| #1 | 90510. | 10010. | 34640. | 12850. | 12230. | 26170. |
| #2 | 89810. | 9880. | 34370. | 12880. | 12110. | 26190. |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **26.546** | **.3947** | **646.4** |
| Stddev | .130 | .0004 | 1.8 |
| %RSD | .49095 | .0946 | .2728 |
| #1 | 26.453 | .3949 | 647.6 |
| #2 | 26.638 | .3944 | 645.1 |

| Int. Std. | Y_2243 | Y_3600-2 | In2306 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 5649.1 | 7066.3 | 1450.8 |
| Stddev | 1.4 | 67.0 | 3.8 |
| %RSD | .02459 | .94773 | .26128 |
| #1 | 5648.2 | 7113.6 | 1448.1 |
| #2 | 5650.1 | 7018.9 | 1453.5 |

Sample Name: ICV1 Acquired: 9/23/2010 18:27:50 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-92-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.422** | **4.961** | **2.527** | **2.546** | **5.046** | **.12677** | **.0015** | **1.272** |
| Stddev | .024 | .003 | .005 | .010 | .018 | .00112 | .0013 | .004 |
| %RSD | .5448 | .0664 | .2168 | .4080 | .3487 | .88199 | 92.32 | .3184 |
| #1 | 4.439 | 4.958 | 2.523 | 2.539 | 5.033 | .12598 | .0005 | 1.269 |
| #2 | 4.405 | 4.963 | 2.531 | 2.553 | 5.058 | .12756 | .0024 | 1.275 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.273** | **12.39** | **12.43** | **.5098** | **1.281** | **.6304** | **.6488** | **2.519** |
| Stddev | .002 | .06 | .13 | .0010 | .002 | .0018 | .0029 | .002 |
| %RSD | .1653 | .4678 | 1.055 | .1953 | .1490 | .2904 | .4410 | .0658 |
| #1 | 1.271 | 12.34 | 12.34 | .5091 | 1.280 | .6291 | .6468 | 2.518 |
| #2 | 1.274 | 12.43 | 12.53 | .5105 | 1.282 | .6317 | .6508 | 2.521 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.556** | **12.44** | **12.22** | **12.53** | **1.291** | **1.281** | **2.036** | **1.266** |
| Stddev | .009 | .03 | .03 | .02 | .001 | .000 | .004 | .004 |
| %RSD | .3734 | .2398 | .2279 | .1600 | .0375 | .0063 | .1751 | .3084 |
| #1 | 2.549 | 12.42 | 12.24 | 12.52 | 1.291 | 1.281 | 2.033 | 1.264 |
| #2 | 2.562 | 12.46 | 12.20 | 12.55 | 1.292 | 1.281 | 2.038 | 1.269 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICV1 Acquired: 9/23/2010 18:27:50 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-92-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.55** | **2.516** | **.6333** | **12.40** | **-.0004** | **1.303** | **1.262** | **1.262** |
| Stddev | .05 | .004 | .0007 | .01 | .0001 | .004 | .005 | .000 |
| %RSD | .4311 | .1609 | .1151 | .0424 | 31.20 | .3417 | .4125 | .0274 |
| #1 | 12.59 | 2.513 | .6327 | 12.40 | -.0003 | 1.306 | 1.258 | 1.263 |
| #2 | 12.51 | 2.519 | .6338 | 12.41 | -.0005 | 1.300 | 1.265 | 1.262 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0071** | **-.0557** | **2.052** | **2.602** | **.0029** | **.00050** | **-.0083** | **.0016** |
| Stddev | .0028 | .0071 | .000 | .011 | .0024 | .00009 | .0037 | .0039 |
| %RSD | 39.17 | 12.69 | .0114 | .4156 | 82.01 | 17.649 | 44.06 | 250.5 |
| #1 | -.0051 | -.0607 | 2.052 | 2.594 | .0012 | .00057 | -.0109 | -.0012 |
| #2 | -.0090 | -.0507 | 2.052 | 2.610 | .0046 | .00044 | -.0057 | .0043 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5730.6 | 116760. | 7151.0 | 1473.9 |
| Stddev | 3.9 | 658. | 13.6 | 1.2 |
| %RSD | .06852 | .56325 | .19074 | .07946 |
| #1 | 5727.8 | 116300. | 7160.6 | 1474.7 |
| #2 | 5733.3 | 117230. | 7141.3 | 1473.0 |

Sample Name: ICVB1 Acquired: 9/23/2010 18:30:55 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-81-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.047** | **.9746** | **-.0018** | **.0016** | **.0015** | **.00012** | **2.029** | **-.0002** |
| Stddev | .008 | .0031 | .0011 | .0004 | .0003 | .00003 | .003 | .0001 |
| %RSD | .7631 | .3200 | 60.33 | 25.26 | 20.12 | 28.961 | .1235 | 43.09 |
| #1 | 1.052 | .9768 | -.0010 | .0013 | .0013 | .00009 | 2.027 | -.0002 |
| #2 | 1.041 | .9724 | -.0026 | .0018 | .0017 | .00014 | 2.031 | -.0001 |
| Check ? | Chk Pass | None | None | None | None | None | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **5.016** | **5.029** | **-.0005** | **-.0002** | **.0007** | **.0006** | **10.00** |
| Stddev | .0000 | .045 | .044 | .0002 | .0002 | .0001 | .0006 | .06 |
| %RSD | 141.5 | .8925 | .8765 | 45.78 | 131.0 | 13.38 | 92.56 | .6270 |
| #1 | .0000 | 4.985 | 4.997 | -.0003 | -.0003 | .0007 | .0010 | 9.956 |
| #2 | .0001 | 5.048 | 5.060 | -.0007 | .0000 | .0008 | .0002 | 10.04 |
| Check ? | None | None | Chk Pass | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **4.873** | **4.888** | **5.017** | **9.740** | **10.06** | **.0020** | **-.0002** |
| Stddev | .0003 | .062 | .010 | .017 | .032 | .08 | .0001 | .0001 |
| %RSD | 466.7 | 1.270 | .2088 | .3366 | .3316 | .7667 | 3.243 | 22.76 |
| #1 | -.0001 | 4.830 | 4.880 | 5.005 | 9.763 | 10.00 | .0020 | -.0002 |
| #2 | .0003 | 4.917 | 4.895 | 5.028 | 9.717 | 10.11 | .0019 | -.0003 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICVB1 Acquired: 9/23/2010 18:30:55 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-81-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0312** | **.0000** | **-.0001** | **8.126** | **5.055** | **.0068** | **.0002** | **.0003** |
| Stddev | .0810 | .0005 | .0000 | .043 | .043 | .0005 | .0001 | .0000 |
| %RSD | 259.6 | 981.7 | 34.60 | .5262 | .8439 | 7.499 | 25.72 | 13.10 |
| #1 | .0261 | .0004 | -.0001 | 8.096 | 5.025 | .0071 | .0003 | .0003 |
| #2 | -.0884 | -.0003 | -.0001 | 8.157 | 5.085 | .0064 | .0002 | .0003 |
| Check ? | None | None | None | None | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **5.093** | **5.187** | **.0005** | **.0011** | **2.006** | **1.9368** | F **.0045** | F **.0381** |
| Stddev | .017 | .014 | .0001 | .0006 | .014 | .0129 | .0013 | .0041 |
| %RSD | .3267 | .2655 | 9.790 | 59.55 | .6853 | .66765 | 28.99 | 10.71 |
| #1 | 5.081 | 5.197 | .0006 | .0015 | 1.996 | 1.9276 | .0054 | .0352 |
| #2 | 5.105 | 5.178 | .0005 | .0006 | 2.015 | 1.9459 | .0035 | .0410 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Fail | Chk Fail |
| Value | | | | | | | 5.000 | 5.000 |
| Range | | | | | | | -5.000% | -5.000% |

See ICVC
MMR
9/24/10

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5775.9 | 117220. | 7246.3 | 1478.0 |
| Stddev | 1.3 | 279. | 36.8 | 6.8 |
| %RSD | .02166 | .23776 | .50751 | .45941 |
| #1 | 5776.8 | 117420. | 7272.3 | 1482.8 |
| #2 | 5775.0 | 117020. | 7220.3 | 1473.2 |

Sample Name: ICVC1 Acquired: 9/23/2010 18:34:12 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-87-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0051** | **.0041** | **-.0001** | **.0003** | **.0032** | **.00005** | **.0075** | **.0000** |
| Stddev | .0000 | .0015 | .0009 | .0010 | .0007 | .00002 | .0004 | .0001 |
| %RSD | .1283 | 35.00 | 735.3 | 340.6 | 20.26 | 38.827 | 4.717 | 1120. |
| #1 | .0051 | .0031 | .0005 | .0010 | .0028 | .00006 | .0072 | .0000 |
| #2 | .0051 | .0052 | -.0008 | -.0004 | .0037 | .00003 | .0077 | .0000 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0041** | **.0075** | **.0000** | **.0001** | **.0007** | **.0011** | **.0011** |
| Stddev | .000 | .0018 | .0001 | .0005 | .0004 | .0001 | .0000 | .0012 |
| %RSD | 221.1 | 42.85 | 1.009 | 3063. | 782.3 | 19.42 | 3.024 | 113.9 |
| #1 | .0000 | .0054 | .0074 | .0003 | .0003 | .0006 | .0012 | .0002 |
| #2 | -.0001 | .0029 | .0075 | -.0003 | -.0002 | .0008 | .0011 | .0019 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **.0103** | **.0055** | **.0063** | **.0005** | **.0012** | **.0005** | **-.0001** |
| Stddev | .0003 | .0047 | .0001 | .0024 | .0000 | .0019 | .0002 | .0001 |
| %RSD | 40.60 | 45.89 | 1.078 | 37.58 | 5.297 | 152.0 | 39.78 | 156.9 |
| #1 | -.0010 | .0069 | .0055 | .0079 | .0005 | -.0001 | .0003 | -.0002 |
| #2 | -.0006 | .0136 | .0054 | .0046 | .0005 | .0026 | .0006 | .0000 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICVC1 Acquired: 9/23/2010 18:34:12 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-87-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0680** | **-.0023** | **-.0001** | **-.0134** | **.0002** | **-.0002** | **-.0001** | **.0000** |
| Stddev | .1021 | .0001 | .0002 | .0033 | .0006 | .0003 | .0000 | .000 |
| %RSD | 150.2 | 6.100 | 277.8 | 24.34 | 312.7 | 168.8 | 39.18 | 304.8 |
| #1 | -.1402 | -.0022 | .0001 | -.0157 | -.0002 | .0000 | -.0001 | .0000 |
| #2 | .0042 | -.0024 | -.0002 | -.0111 | .0006 | -.0004 | -.0001 | .0000 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0063** | **-.0595** | **.0002** | **-.0004** | **-.0008** | **.00046** | **5.112** | **5.124** |
| Stddev | .0043 | .0012 | .0003 | .0009 | .0048 | .00021 | .006 | .009 |
| %RSD | 67.96 | 2.009 | 178.0 | 199.7 | 582.2 | 45.751 | .1141 | .1704 |
| #1 | .0033 | -.0586 | .0004 | -.0011 | -.0042 | .00061 | 5.107 | 5.118 |
| #2 | .0094 | -.0603 | .0000 | .0002 | .0026 | .00031 | 5.116 | 5.130 |
| Check ? | None | None | None | None | None | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5769.9 | 117700. | 7189.5 | 1479.1 |
| Stddev | 10.5 | 104. | 22.4 | 2.8 |
| %RSD | .18202 | .08795 | .31155 | .19045 |
| #1 | 5777.3 | 117780. | 7205.3 | 1481.1 |
| #2 | 5762.5 | 117630. | 7173.7 | 1477.1 |

Sample Name: ICB Acquired: 9/23/2010 18:37:51 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0025** | **-.0007** | **.0011** | **.0008** | **.00008** | **.0023** | **.0000** |
| Stddev | .0003 | .0024 | .0003 | .0002 | .0003 | .00001 | .0003 | .0000 |
| %RSD | 81.49 | 95.97 | 42.53 | 17.42 | 42.24 | 10.963 | 13.99 | 226.2 |
| #1 | .0006 | -.0042 | -.0009 | .0012 | .0010 | .00009 | .0021 | .0000 |
| #2 | .0002 | -.0008 | -.0005 | .0009 | .0005 | .00008 | .0026 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0086** | **.0009** | **-.0004** | **-.0001** | **.0003** | **.0005** | **-.0003** |
| Stddev | .0000 | .0109 | .0000 | .0003 | .0004 | .0004 | .0001 | .0007 |
| %RSD | 378.1 | 126.9 | 3.004 | 66.75 | 612.8 | 110.5 | 16.43 | 210.0 |
| #1 | .0000 | -.0009 | .0009 | -.0007 | .0002 | .0006 | .0005 | -.0009 |
| #2 | .0000 | -.0164 | .0009 | -.0002 | -.0003 | .0001 | .0006 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **-.0001** | **.0004** | **.0018** | **.0001** | **.0005** | **.0003** | **.0000** |
| Stddev | .0005 | .0132 | .0001 | .0015 | .0000 | .0011 | .0002 | .0002 |
| %RSD | 246.7 | 21030. | 12.46 | 81.49 | 13.94 | 213.3 | 80.41 | 893.6 |
| #1 | .0001 | -.0094 | .0004 | .0028 | .0001 | .0013 | .0001 | .0001 |
| #2 | -.0005 | .0093 | .0004 | .0008 | .0001 | -.0003 | .0004 | -.0001 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: ICB Acquired: 9/23/2010 18:37:51 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0804** | **-.0017** | **.0001** | **-.0080** | **-.0002** | **.0001** | **.0001** | **.0000** |
| Stddev | .0242 | .0001 | .0001 | .0145 | .0004 | .0001 | .0001 | .000 |
| %RSD | 30.08 | 4.038 | 37.84 | 180.3 | 160.0 | 167.3 | 184.3 | 384.1 |
| #1 | -.0974 | -.0018 | .0001 | .0022 | -.0005 | .0000 | .0002 | .0001 |
| #2 | -.0633 | -.0017 | .0002 | -.0182 | .0000 | .0001 | .0000 | -.0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0018** | F **-.0700** | **.0002** | **-.0002** | **.0012** | **.00007** | **.0032** | **.0018** |
| Stddev | .0026 | .0011 | .0001 | .0006 | .0012 | .00011 | .0000 | .0030 |
| %RSD | 142.2 | 1.523 | 27.64 | 222.7 | 106.8 | 153.23 | .5370 | 170.9 |
| #1 | .0000 | -.0708 | .0002 | .0001 | .0020 | .00015 | .0032 | -.0004 |
| #2 | .0037 | -.0693 | .0003 | -.0006 | .0003 | -.00001 | .0032 | .0039 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5747.6 | 117700. | 7186.5 | 1461.7 |
| Stddev | 15.2 | 82. | 8.7 | 1.1 |
| %RSD | .26448 | .06988 | .12105 | .07211 |
| #1 | 5736.8 | 117640. | 7192.7 | 1460.9 |
| #2 | 5758.3 | 117760. | 7180.4 | 1462.4 |

Sample Name: CCVA1 Acquired: 9/23/2010 18:40:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2483** | **.2326** | **.2500** | **.0014** | **.0007** | **.25012** | **.2533** | **.2528** |
| Stddev | .0023 | .0021 | .0016 | .0011 | .0000 | .00101 | .0016 | .0018 |
| %RSD | .9163 | .9199 | .6212 | 82.13 | 1.415 | .40187 | .6449 | .7285 |
| #1 | .2452 | .2342 | .2516 | .0028 | .0007 | .24951 | .2514 | .2516 |
| #2 | .2483 | .2320 | .2479 | .0012 | .0007 | .25110 | .2531 | .2519 |
| #3 | .2491 | .2299 | .2506 | .0000 | .0007 | .25084 | .2553 | .2522 |
| #4 | .2506 | .2344 | .2500 | .0015 | .0007 | .24903 | .2536 | .2555 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2526** | **.2343** | **.2434** | **.2512** | **.2542** | **.2561** | **.2522** | **-.0010** |
| Stddev | .0020 | .0035 | .0014 | .0003 | .0019 | .0021 | .0009 | .0014 |
| %RSD | .7781 | 1.506 | .5873 | .1393 | .7488 | .8236 | .3716 | 142.7 |
| #1 | .2514 | .2316 | .2434 | .2508 | .2533 | .2560 | .2513 | -.0002 |
| #2 | .2519 | .2309 | .2455 | .2516 | .2530 | .2551 | .2522 | -.0021 |
| #3 | .2515 | .2376 | .2425 | .2512 | .2533 | .2542 | .2535 | -.0022 |
| #4 | .2555 | .2371 | .2424 | .2510 | .2570 | .2591 | .2517 | .0006 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/23/2010 18:40:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2525** | **.2497** | **.2510** | **.2572** | **.2480** | **.2565** | **.2514** | **.2521** |
| Stddev | .0023 | .0094 | .0013 | .0011 | .0006 | .0018 | .0021 | .0020 |
| %RSD | .9100 | 3.784 | .5113 | .4269 | .2426 | .7064 | .8227 | .8044 |
| #1 | .2510 | .2508 | .2518 | .2588 | .2481 | .2552 | .2502 | .2508 |
| #2 | .2523 | .2617 | .2523 | .2566 | .2488 | .2592 | .2500 | .2511 |
| #3 | .2510 | .2389 | .2504 | .2569 | .2477 | .2557 | .2509 | .2513 |
| #4 | .2559 | .2472 | .2494 | .2564 | .2473 | .2559 | .2545 | .2551 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0523** | **.2499** | **.2502** | **-.0100** | **.2558** | **.2503** | **.2558** | **.2471** |
| Stddev | .0566 | .0011 | .0009 | .0157 | .0017 | .0010 | .0020 | .0011 |
| %RSD | 108.3 | .4514 | .3739 | 156.6 | .6545 | .3967 | .7699 | .4644 |
| #1 | -.0436 | .2486 | .2489 | -.0220 | .2551 | .2500 | .2548 | .2455 |
| #2 | .0115 | .2493 | .2502 | -.0046 | .2549 | .2508 | .2551 | .2471 |
| #3 | -.1262 | .2505 | .2508 | .0097 | .2549 | .2514 | .2545 | .2479 |
| #4 | -.0508 | .2511 | .2509 | -.0232 | .2583 | .2491 | .2587 | .2479 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/23/2010 18:40:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0733** | **.2525** | **.2535** | **.0005** | **-.00007** | **-.0006** | **-.0383** |
| Stddev | .0034 | .0085 | .0003 | .0015 | .0012 | .00012 | .0016 | .0017 |
| %RSD | 5422. | 11.57 | .1331 | .5840 | 245.1 | 160.86 | 265.5 | 4.312 |
| #1 | .0004 | -.0775 | .2528 | .2524 | -.0004 | -.00006 | -.0009 | -.0386 |
| #2 | -.0046 | -.0761 | .2527 | .2525 | -.0002 | .00009 | .0017 | -.0400 |
| #3 | .0038 | -.0607 | .2524 | .2536 | .0023 | -.00018 | -.0018 | -.0360 |
| #4 | .0002 | -.0789 | .2521 | .2556 | .0003 | -.00014 | -.0013 | -.0385 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5727.1 | 117220. | 7224.5 | 1467.3 |
| Stddev | 31.0 | 128. | 42.8 | 8.0 |
| %RSD | .54171 | .10923 | .59183 | .54819 |
| #1 | 5740.9 | 117340. | 7207.0 | 1469.9 |
| #2 | 5739.2 | 117060. | 7183.7 | 1470.5 |
| #3 | 5747.5 | 117300. | 7223.6 | 1473.4 |
| #4 | 5680.9 | 117180. | 7283.8 | 1455.5 |

Sample Name: CCVB1 Acquired: 9/23/2010 18:44:36 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.297** | **9.786** | **-.0007** | **1.003** | **9.954** | **.00012** | **.0032** | **-.0002** |
| Stddev | .040 | .056 | .0013 | .003 | .094 | .00004 | .0012 | .0000 |
| %RSD | .5473 | .5734 | 185.9 | .2595 | .9445 | 32.166 | 36.73 | 21.82 |
| #1 | 7.282 | 9.775 | -.0017 | 1.007 | 9.950 | .00008 | .0027 | -.0002 |
| #2 | 7.348 | 9.858 | -.0019 | 1.002 | 10.06 | .00017 | .0027 | -.0001 |
| #3 | 7.305 | 9.788 | .0001 | 1.001 | 9.834 | .00011 | .0025 | -.0001 |
| #4 | 7.253 | 9.722 | .0007 | 1.001 | 9.970 | .00012 | .0050 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **9.820** | **9.665** | **-.0001** | **.0002** | **.0007** | **.0003** | **9.867** |
| Stddev | .0000 | .017 | .080 | .0005 | .0003 | .0003 | .0003 | .032 |
| %RSD | 136.6 | .1684 | .8243 | 433.3 | 140.9 | 38.95 | 114.4 | .3226 |
| #1 | .0000 | 9.818 | 9.604 | .0002 | -.0002 | .0008 | .0006 | 9.878 |
| #2 | .0001 | 9.843 | 9.716 | -.0005 | .0002 | .0003 | -.0001 | 9.846 |
| #3 | .0001 | 9.814 | 9.749 | .0004 | .0005 | .0006 | .0006 | 9.836 |
| #4 | .0000 | 9.803 | 9.590 | -.0005 | .0003 | .0010 | .0002 | 9.906 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/23/2010 18:44:36 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

see CVK
[illegible] 9/24/10

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **9.843** | **9.792** | **10.10** | **.0004** | F **.0003** | **.0002** | **-.0007** |
| Stddev | .0005 | .046 | .049 | .04 | .0000 | .0012 | .0001 | .0001 |
| %RSD | 102.1 | .4650 | .5012 | .4423 | 3.100 | 466.1 | 78.05 | 19.01 |
| #1 | -.0010 | 9.783 | 9.730 | 10.05 | .0004 | .0005 | .0002 | -.0010 |
| #2 | .0002 | 9.894 | 9.817 | 10.08 | .0004 | -.0010 | .0002 | -.0007 |
| #3 | -.0005 | 9.852 | 9.843 | 10.11 | .0004 | .0018 | .0000 | -.0007 |
| #4 | -.0006 | 9.845 | 9.777 | 10.15 | .0004 | -.0002 | .0003 | -.0007 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Fail | None | None |
| Value | | | | | | 1.000 | | |
| Range | | | | | | -5.000% | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.995** | **-.0025** | **-.0001** | **10.00** | **-.0002** | **.0006** | **-.0003** | **-.0004** |
| Stddev | .105 | .0019 | .0001 | .02 | .0006 | .0004 | .0001 | .0001 |
| %RSD | 1.049 | 77.06 | 113.5 | .2431 | 348.5 | 75.05 | 26.11 | 32.95 |
| #1 | 9.994 | -.0031 | -.0002 | 10.00 | .0004 | .0012 | -.0004 | -.0006 |
| #2 | 9.878 | -.0025 | -.0001 | 9.990 | -.0001 | .0005 | -.0003 | -.0003 |
| #3 | 9.976 | .0001 | -.0001 | 9.983 | -.0010 | .0001 | -.0002 | -.0004 |
| #4 | 10.13 | -.0045 | .0000 | 10.04 | .0000 | .0005 | -.0004 | -.0004 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/23/2010 18:44:36 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.10** | **10.11** | **.0007** | **-.0001** | **.9995** | **.97660** | **.9889** | **.9581** |
| Stddev | .01 | .06 | .0001 | .0006 | .0054 | .00113 | .0046 | .0028 |
| %RSD | .1120 | .5924 | 19.04 | 412.5 | .5387 | .11564 | .4682 | .2926 |
| #1 | 10.12 | 10.07 | .0007 | -.0003 | .9965 | .97620 | .9874 | .9614 |
| #2 | 10.10 | 10.07 | .0008 | .0000 | .9987 | .97737 | .9949 | .9546 |
| #3 | 10.09 | 10.09 | .0005 | -.0008 | .9956 | .97518 | .9895 | .9588 |
| #4 | 10.10 | 10.19 | .0006 | .0005 | 1.007 | .97763 | .9839 | .9578 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5759.8 | 116780. | 7192.7 | 1475.0 |
| Stddev | 13.4 | 384. | 26.6 | 3.2 |
| %RSD | .23215 | .32889 | .37035 | .21931 |
| #1 | 5774.4 | 116460. | 7183.2 | 1475.5 |
| #2 | 5742.2 | 117210. | 7170.4 | 1471.4 |
| #3 | 5763.2 | 117010. | 7185.8 | 1479.1 |
| #4 | 5759.5 | 116450. | 7231.4 | 1474.0 |

Sample Name: CCB1 Acquired: 9/23/2010 18:49:58 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0006** | **.0004** | **.0020** | **.0003** | **.00009** | **.0009** | **.0000** |
| Stddev | .0001 | .0018 | .0020 | .0002 | .0003 | .00004 | .0008 | .000 |
| %RSD | 48.74 | 329.4 | 519.5 | 11.53 | 95.46 | 41.743 | 91.81 | 63.98 |
| #1 | .0003 | .0007 | -.0010 | .0021 | .0006 | .00006 | .0003 | .0000 |
| #2 | .0001 | -.0018 | .0018 | .0018 | .0001 | .00012 | .0015 | -.0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0009** | **.0005** | **-.0001** | **.0001** | **.0002** | **-.0001** | **.0010** |
| Stddev | .000 | .0135 | .0000 | .0005 | .0002 | .0006 | .0006 | .0015 |
| %RSD | 12.14 | 1427. | 4.232 | 358.7 | 222.0 | 376.5 | 795.8 | 146.5 |
| #1 | .0000 | .0086 | .0005 | .0002 | -.0001 | -.0003 | -.0005 | .0000 |
| #2 | .0000 | -.0105 | .0006 | -.0005 | .0003 | .0006 | .0004 | .0021 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0079** | **.0003** | **.0014** | **.0000** | **.0005** | **.0001** | **-.0001** |
| Stddev | .0008 | .0183 | .0000 | .0008 | .000 | .0008 | .0001 | .0000 |
| %RSD | 1205. | 230.9 | 2.467 | 56.78 | 323.7 | 148.7 | 66.79 | 10.76 |
| #1 | -.0005 | -.0209 | .0003 | .0008 | .0000 | .0011 | .0000 | -.0001 |
| #2 | .0006 | .0050 | .0003 | .0019 | -.0001 | .0000 | .0001 | -.0001 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB1 Acquired: 9/23/2010 18:49:58 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0252** | **-.0020** | **.0002** | **-.0025** | **.0004** | **-.0001** | **.0001** | **-.0001** |
| Stddev | .0485 | .0011 | .0013 | .0023 | .0009 | .0002 | .0000 | .0001 |
| %RSD | 192.2 | 56.60 | 817.3 | 90.27 | 201.7 | 362.3 | 50.89 | 183.1 |
| #1 | .0091 | -.0012 | .0011 | -.0041 | -.0002 | .0001 | .0000 | .0000 |
| #2 | -.0595 | -.0028 | -.0008 | -.0009 | .0011 | -.0002 | .0001 | -.0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0024** | F **-.0943** | **.0002** | **-.0007** | **.0025** | **-.00010** | **.0050** | **-.0025** |
| Stddev | .0028 | .0028 | .0002 | .0012 | .0016 | .00030 | .0014 | .0019 |
| %RSD | 116.0 | 2.942 | 83.20 | 178.1 | 62.14 | 294.45 | 28.82 | 74.34 |
| #1 | .0043 | -.0924 | .0003 | .0002 | .0036 | -.00031 | .0040 | -.0012 |
| #2 | .0004 | -.0963 | .0001 | -.0016 | .0014 | .00011 | .0060 | -.0038 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5753.6 | 117910. | 7153.1 | 1462.1 |
| Stddev | 11.7 | 339. | 3.1 | 1.7 |
| %RSD | .20332 | .28790 | .04290 | .11374 |
| #1 | 5745.3 | 118150. | 7155.3 | 1463.3 |
| #2 | 5761.9 | 117670. | 7150.9 | 1460.9 |

Sample Name: CRI Acquired: 9/23/2010 18:55:56 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP8-1-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0546** | **.0478** | **.0489** | **.0997** | **.0058** | **.00487** | **.0506** | **.0054** |
| Stddev | .0002 | .0032 | .0004 | .0017 | .0004 | .00005 | .0018 | .0000 |
| %RSD | .4166 | 6.681 | .8112 | 1.672 | 6.450 | 1.0087 | 3.555 | .0081 |
| #1 | .0545 | .0456 | .0486 | .0985 | .0061 | .00491 | .0518 | .0054 |
| #2 | .0548 | .0501 | .0492 | .1009 | .0055 | .00484 | .0493 | .0054 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0054** | **.0398** | **.0517** | **.0048** | **.0104** | **.0117** | **.0105** | **.0187** |
| Stddev | .0000 | .0035 | .0001 | .0002 | .0002 | .0001 | .0001 | .0016 |
| %RSD | .7454 | 8.904 | .2711 | 3.901 | 2.005 | .5984 | .4827 | 8.723 |
| #1 | .0054 | .0373 | .0518 | .0046 | .0102 | .0116 | .0105 | .0198 |
| #2 | .0054 | .0424 | .0516 | .0049 | .0105 | .0117 | .0104 | .0175 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0501** | **.0172** | **.0203** | **.0216** | **.0051** | **.0056** | **.0100** | **.0203** |
| Stddev | .0004 | .0003 | .0001 | .0008 | .0000 | .0009 | .0001 | .0002 |
| %RSD | .8283 | 1.858 | .3392 | 3.937 | .2265 | 16.74 | 1.119 | .7627 |
| #1 | .0504 | .0170 | .0202 | .0210 | .0051 | .0063 | .0100 | .0204 |
| #2 | .0498 | .0174 | .0203 | .0222 | .0051 | .0050 | .0099 | .0202 |
| Check ? | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CRI Acquired: 9/23/2010 18:55:56 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP8-1-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2917** | **.0989** | **.0110** | **.1726** | **.0499** | **.0100** | **.0106** | **.0104** |
| Stddev | .0148 | .0018 | .0005 | .0266 | .0003 | .0003 | .0001 | .0001 |
| %RSD | 5.087 | 1.860 | 4.715 | 15.43 | .6715 | 2.696 | .4808 | 1.056 |
| #1 | .2813 | .0976 | .0107 | .1915 | .0502 | .0102 | .0106 | .0105 |
| #2 | .3022 | .1002 | .0114 | .1538 | .0497 | .0098 | .0106 | .0104 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1973** | **.3075** | **.0105** | **.2055** | **.0102** | **.00969** | **.0035** | **-.0077** |
| Stddev | .0005 | .0027 | .0000 | .0011 | .0002 | .00002 | .0005 | .0006 |
| %RSD | .2422 | .8935 | .4127 | .5510 | 1.630 | .19146 | 15.29 | 7.922 |
| #1 | .1977 | .3094 | .0104 | .2063 | .0101 | .00967 | .0039 | -.0073 |
| #2 | .1970 | .3055 | .0105 | .2047 | .0103 | .00970 | .0031 | -.0081 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5708.1 | 116440. | 7098.7 | 1469.5 |
| Stddev | .5 | 266. | 8.8 | 1.8 |
| %RSD | .00858 | .22832 | .12361 | .12341 |
| #1 | 5707.7 | 116630. | 7092.5 | 1468.3 |
| #2 | 5708.4 | 116250. | 7104.9 | 1470.8 |

Sample Name: CRI Acquired: 9/23/2010 18:58:49 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICAP ICP7-89-A 0.1/10

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0026** | **.0009** | **.0064** | **.0119** | **.0022** | **.00028** | **.0078** |
| Stddev | .0002 | .0011 | .0000 | .0001 | .0000 | .00005 | .0005 |
| %RSD | 8.552 | 118.0 | .7017 | .9784 | 1.814 | 16.578 | 5.952 |
| #1 | .0027 | .0001 | .0063 | .0118 | .0022 | .00032 | .0082 |
| #2 | .0024 | .0017 | .0064 | .0120 | .0022 | .00025 | .0075 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.0005** | **.0043** | **.0048** | **.0018** | **.0007** | **.0027** |
| Stddev | .0000 | .0000 | .0015 | .0002 | .0003 | .0000 | .0009 |
| %RSD | 2.595 | 3.218 | 34.44 | 3.898 | 18.97 | 1.616 | 34.22 |
| #1 | .0005 | .0005 | .0054 | .0047 | .0016 | .0007 | .0034 |
| #2 | .0005 | .0005 | .0033 | .0050 | .0021 | .0007 | .0021 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0024** | **.0067** | **.0090** | **.0084** | **.0021** | **.0038** | **.0006** |
| Stddev | .0004 | .0012 | .0006 | .0127 | .0000 | .0022 | .0001 |
| %RSD | 15.26 | 17.91 | 6.561 | 151.9 | .9296 | 59.32 | 8.245 |
| #1 | .0027 | .0075 | .0094 | .0174 | .0021 | .0022 | .0006 |
| #2 | .0022 | .0059 | .0086 | -.0006 | .0021 | .0054 | .0007 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: CRI Acquired: 9/23/2010 18:58:49 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICAP ICP7-89-A 0.1/10

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0016** | **.0021** | **.0020** | **.0609** | **.0172** | **.0027** | **.1729** |
| Stddev | .0005 | .0001 | .0001 | .0226 | .0010 | .0001 | .0064 |
| %RSD | 33.01 | 4.483 | 7.040 | 37.03 | 6.030 | 4.485 | 3.691 |
| #1 | .0012 | .0020 | .0019 | .0450 | .0165 | .0028 | .1774 |
| #2 | .0019 | .0022 | .0021 | .0769 | .0179 | .0026 | .1684 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0097** | **.0023** | **.0021** | **.0020** | **.0209** | F **-.0571** | **.0011** |
| Stddev | .0002 | .0004 | .0000 | .0002 | .0002 | .0080 | .0001 |
| %RSD | 1.748 | 17.80 | 1.157 | 9.550 | 1.044 | 13.99 | 6.477 |
| #1 | .0096 | .0026 | .0021 | .0019 | .0211 | -.0515 | .0010 |
| #2 | .0098 | .0020 | .0021 | .0022 | .0208 | -.0628 | .0011 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass |
| Value | | | | | | .0500 | |
| Range | | | | | | -50.00% | |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0093** | **.0111** | F **-.00008** | **.0532** | **.0490** |
| Stddev | .0000 | .0031 | .00009 | .0020 | .0013 |
| %RSD | .0801 | 27.79 | 116.72 | 3.667 | 2.737 |
| #1 | .0093 | .0133 | -.00001 | .0518 | .0480 |
| #2 | .0093 | .0089 | -.00014 | .0546 | .0499 |
| Check ? | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass |
| Value | | | .00020 | | |
| Range | | | -50.000% | | |

Sample Name: CRI Acquired: 9/23/2010 18:58:49 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICAP ICP7-89-A 0.1/10

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5750.2 | 117460. | 7128.9 | 1478.1 |
| Stddev | 11.4 | 111. | 15.1 | .3 |
| %RSD | .19759 | .09472 | .21127 | .02252 |
| | | | | |
| #1 | 5758.2 | 117380. | 7139.5 | 1478.3 |
| #2 | 5742.2 | 117540. | 7118.2 | 1477.8 |

Sample Name: ICSA Acquired: 9/23/2010 19:01:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-83-C

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **35.05** | **457.0** | **.0041** | **.0000** | **.0006** | **-.00036** | **.0106** | **-.0036** |
| Stddev | .01 | 2.1 | .0016 | .003 | .0001 | .00010 | .0001 | .0001 |
| %RSD | .0323 | .4532 | 39.90 | 55960. | 19.70 | 28.926 | .5084 | 2.489 |
| #1 | 35.05 | 455.6 | .0030 | .0020 | .0006 | -.00028 | .0106 | -.0036 |
| #2 | 35.06 | 458.5 | .0053 | -.0020 | .0005 | -.00043 | .0105 | -.0037 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0008** | **462.2** | ***** | **.0032** | **-.0009** | **-.0001** | **.0022** | **184.9** |
| Stddev | .0001 | 4.2 | ----- | .0005 | .0003 | .0002 | .0000 | 3.4 |
| %RSD | 12.24 | .9095 | ----- | 14.82 | 36.86 | 289.5 | 1.218 | 1.821 |
| #1 | .0009 | 459.2 | ----- | .0029 | -.0012 | .0001 | .0022 | 182.5 |
| #2 | .0007 | 465.2 | ----- | .0036 | -.0007 | -.0002 | .0022 | 187.2 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0027** | **487.1** | ***** | **412.5** | **.0182** | **.0125** | **.0002** | **.0028** |
| Stddev | .0007 | 5.5 | ----- | 1.2 | .0001 | .0001 | .0005 | .0001 |
| %RSD | 25.58 | 1.123 | ----- | .2974 | .6115 | .4791 | 291.1 | 3.711 |
| #1 | .0031 | 483.2 | ----- | 411.6 | .0183 | .0125 | -.0002 | .0028 |
| #2 | .0022 | 490.9 | ----- | 413.4 | .0182 | .0124 | .0005 | .0029 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSA Acquired: 9/23/2010 19:01:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-83-C

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.1143** | **.0081** | **-.0001** | **.0304** | **.0011** | **.0052** | **-.0083** | **-.0093** |
| Stddev | .0673 | .0021 | .0001 | .0104 | .0001 | .0003 | .0002 | .0001 |
| %RSD | 58.89 | 26.41 | 50.28 | 34.25 | 6.947 | 5.558 | 2.656 | 1.343 |
| #1 | -.1619 | .0096 | -.0001 | .0378 | .0011 | .0050 | -.0081 | -.0092 |
| #2 | -.0667 | .0065 | -.0002 | .0231 | .0012 | .0054 | -.0084 | -.0094 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0175** | **-.0780** | **.0047** | **-.0022** | **.0081** | **.01118** | **.0254** | **-.1189** |
| Stddev | .0003 | .0066 | .0003 | .0000 | .0002 | .00016 | .0000 | .0038 |
| %RSD | 1.914 | 8.426 | 6.245 | 1.014 | 1.865 | 1.4678 | .0381 | 3.184 |
| #1 | .0178 | -.0826 | .0049 | -.0022 | .0080 | .01106 | .0254 | -.1162 |
| #2 | .0173 | -.0733 | .0045 | -.0022 | .0082 | .01130 | .0254 | -.1215 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5227.6 | 105580. | 6883.0 | 1293.4 |
| Stddev | 4.1 | 406. | 71.5 | 2.0 |
| %RSD | .07840 | .38447 | 1.0395 | .15274 |
| #1 | 5224.7 | 105290. | 6933.6 | 1292.0 |
| #2 | 5230.5 | 105860. | 6832.4 | 1294.8 |

Sample Name: ICSAB Acquired: 9/23/2010 19:05:53 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-92-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **35.20** | **457.5** | **.9463** | **.0037** | **.5201** | **.47776** | **.0107** | **.9708** |
| Stddev | .02 | 1.6 | .0020 | .0032 | .0005 | .00386 | .0006 | .0040 |
| %RSD | .0526 | .3393 | .2139 | 86.07 | .1032 | .80843 | 5.266 | .4101 |
| #1 | 35.18 | 456.4 | .9478 | .0060 | .5205 | .47503 | .0103 | .9680 |
| #2 | 35.21 | 458.6 | .9449 | .0015 | .5197 | .48049 | .0111 | .9736 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9460** | **468.7** | ***** | **.5017** | **.4847** | **.4883** | **.4954** | **186.6** |
| Stddev | .0016 | .5 | ----- | .0008 | .0008 | .0028 | .0013 | 1.0 |
| %RSD | .1657 | .1076 | ----- | .1533 | .1731 | .5650 | .2640 | .5104 |
| #1 | .9449 | 468.4 | ----- | .5012 | .4842 | .4863 | .4944 | 185.9 |
| #2 | .9471 | 469.1 | ----- | .5023 | .4853 | .4902 | .4963 | 187.3 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.001** | **497.6** | ***** | **417.6** | **.5114** | **.5458** | **-.0001** | **.9378** |
| Stddev | .005 | 1.3 | ----- | 4.1 | .0040 | .0050 | .0001 | .0020 |
| %RSD | .5214 | .2637 | ----- | .9851 | .7900 | .9153 | 212.0 | .2165 |
| #1 | .9970 | 498.6 | ----- | 414.7 | .5086 | .5494 | -.0002 | .9364 |
| #2 | 1.004 | 496.7 | ----- | 420.5 | .5143 | .5423 | .0000 | .9393 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSAB Acquired: 9/23/2010 19:05:53 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B ICP7-92-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.1205** | **.0046** | **.9695** | **.0241** | **.0035** | **.5231** | **.9551** | **.8830** |
| Stddev | .0070 | .0069 | .0033 | .0057 | .0008 | .0005 | .0042 | .0005 |
| %RSD | 5.839 | 150.6 | .3356 | 23.63 | 22.30 | .1025 | .4433 | .0607 |
| #1 | -.1155 | .0094 | .9718 | .0201 | .0040 | .5227 | .9521 | .8834 |
| #2 | -.1255 | -.0003 | .9672 | .0281 | .0029 | .5235 | .9581 | .8827 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0073** | **.0118** | **.0050** | **.0000** | **.0073** | **.01144** | **.0186** | **-.0413** |
| Stddev | .0053 | .0028 | .0003 | .004 | .0002 | .00006 | .0037 | .0026 |
| %RSD | 72.71 | 23.41 | 5.317 | 62380. | 2.952 | .49940 | 19.67 | 6.183 |
| #1 | .0035 | .0099 | .0052 | -.0030 | .0071 | .01148 | .0160 | -.0395 |
| #2 | .0110 | .0138 | .0048 | .0030 | .0074 | .01140 | .0212 | -.0431 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5191.0 | 103930. | 6763.5 | 1283.7 |
| Stddev | 3.0 | 440. | 22.7 | 4.9 |
| %RSD | .05686 | .42367 | .33554 | .38114 |
| #1 | 5193.1 | 103610. | 6747.4 | 1287.1 |
| #2 | 5188.9 | 104240. | 6779.5 | 1280.2 |

Sample Name: RB Acquired: 9/23/2010 19:10:47 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0285** | **.0266** | **-.0022** | **.0012** | F **.0011** | **.00009** | F **-.0041** | **.0000** |
| #1 | .0287 | .0255 | -.0034 | -.0001 | .0011 | .00010 | -.0034 | .0000 |
| #2 | .0284 | .0276 | -.0010 | .0025 | .0012 | .00009 | -.0049 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0209** | **.0300** | F **-.0003** | **-.0003** | **.0007** | **.0006** | F **.0132** |
| #1 | .0000 | .0220 | .0302 | -.0005 | -.0003 | .0005 | .0008 | .0143 |
| #2 | .0001 | .0198 | .0299 | -.0001 | -.0004 | .0008 | .0004 | .0121 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **.0285** | **.0273** | **.0002** | **.0000** | **.0000** | F **-.0111** | **-.0012** |
| #1 | -.0009 | .0285 | .0265 | .0002 | .0000 | .0000 | -.0445 | -.0017 |
| #2 | -.0006 | .0285 | .0281 | .0002 | -.0001 | .0001 | .0223 | -.0006 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | F **-.0265** | **-.0001** | **.0000** | F **.0001** | F **.0002** | **.0022** | **-.0819** |
| #1 | .0012 | -.0437 | -.0003 | .0000 | .0002 | .0001 | -.0012 | -.0774 |
| #2 | .0002 | -.0094 | .0000 | .0000 | .0001 | .0004 | .0055 | -.0865 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **-.0001** | **-.0005** | **.00003** | **.0051** | **-.0092** |
| #1 | .0002 | .0004 | -.0028 | .00001 | .0039 | -.0099 |
| #2 | .0003 | -.0005 | .0019 | .00005 | .0063 | -.0085 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5716.9 | 116310. | 7070.7 | 1459.1 |
| #1 | 5725.5 | 116400. | 7046.2 | 1459.0 |
| #2 | 5708.4 | 116210. | 7095.3 | 1459.2 |

Sample Name: K1010073-MB Acquired: 9/23/2010 19:13:43 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **-.0020** | **-.0017** | **.0003** | **.0002** | **.00007** | **-.0039** | **-.0001** |
| #1 | .0002 | -.0032 | -.0010 | -.0001 | .0003 | .00008 | -.0045 | -.0001 |
| #2 | .0008 | -.0008 | -.0024 | .0007 | .0001 | .00006 | -.0034 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0051** | **.0019** | **.0000** | **.0000** | **.0004** | **.0011** | **-.0032** |
| #1 | .0000 | -.0094 | .0019 | .0001 | -.0002 | -.0002 | -.0001 | -.0048 |
| #2 | .0000 | -.0009 | .0020 | .0000 | .0002 | .0010 | .0023 | -.0016 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0004** | **.0018** | **.0000** | **.0000** | **.0002** | **-.0326** | **-.0014** |
| #1 | .0000 | .0003 | .0013 | .0000 | -.0001 | .0001 | -.0167 | -.0009 |
| #2 | .0003 | .0004 | .0023 | .0000 | .0001 | .0003 | -.0486 | -.0020 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **-.0208** | **-.0003** | **.0002** | **.0001** | **.0005** | F **.1274** | F **-.0981** |
| #1 | .0001 | -.0200 | .0001 | .0001 | .0000 | .0006 | .1278 | -.1015 |
| #2 | -.0006 | -.0216 | -.0008 | .0004 | .0003 | .0004 | .1270 | -.0947 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0026** | **-.0001** | **-.00009** | **.0037** | **.0039** |
| #1 | .0000 | -.0031 | -.0005 | -.00006 | .0028 | .0057 |
| #2 | .0003 | -.0021 | .0003 | -.00011 | .0047 | .0021 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5685.1 | 116700. | 7125.1 | 1451.2 |
| #1 | 5679.3 | 116390. | 7088.6 | 1450.2 |
| #2 | 5690.8 | 117000. | 7161.6 | 1452.2 |

No 5 LCS/Spike Curve 9/24/10

Sample Name: LCSW Acquired: 9/23/2010 19:16:06 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.723** | **2.354** | **2.361** | **4.817** | **.11750** | F **.8941** | **1.197** | **1.200** |
| #1 | 4.732 | 2.349 | 2.358 | 4.807 | .11752 | .8957 | 1.193 | 1.197 |
| #2 | 4.713 | 2.360 | 2.365 | 4.827 | .11748 | .8926 | 1.200 | 1.203 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **11.79** | **11.59** | **.4820** | **1.224** | **.6099** | **.6217** | **2.370** | **2.439** |
| #1 | 11.76 | 11.64 | .4819 | 1.223 | .6103 | .6229 | 2.370 | 2.434 |
| #2 | 11.82 | 11.54 | .4821 | 1.225 | .6095 | .6206 | 2.369 | 2.443 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.02** | **1.198** | F **.9020** | **1.199** | **11.88** | **2.258** | **.5992** | **12.07** |
| #1 | 12.02 | 1.199 | .8991 | 1.195 | 11.91 | 2.254 | .6016 | 12.07 |
| #2 | 12.02 | 1.197 | .9049 | 1.202 | 11.85 | 2.262 | .5968 | 12.06 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **1.216** | **1.199** | **1.153** | **.0979** | **-.1056** | **.0000** | **2.484** |
| #1 | .0003 | 1.218 | 1.198 | 1.151 | .0992 | -.1119 | -.0001 | 2.485 |
| #2 | -.0001 | 1.215 | 1.201 | 1.154 | .0966 | -.0992 | .0001 | 2.482 |

| Elem | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0011** | **.00037** | **-.0093** | **.0060** |
| #1 | .0015 | .00041 | -.0097 | .0062 |
| #2 | .0007 | .00032 | -.0088 | .0058 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5697.6** | **116920.** | **7155.4** | **1454.8** |
| #1 | 5701.6 | 117240. | 7174.9 | 1455.1 |
| #2 | 5693.6 | 116600. | 7135.9 | 1454.6 |

Cmmk 9/24/10

Sample Name: K1010073-001 Acquired: 9/23/2010 19:19:10 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0022** | F **.0009** | **-.0032** | **.0022** | **.0154** | **.00004** | F **.0267** | **-.0001** |
| #1 | .0022 | .0025 | -.0035 | .0045 | .0152 | .00002 | .0264 | .0000 |
| #2 | .0023 | -.0007 | -.0028 | -.0001 | .0155 | .00006 | .0269 | -.0001 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **28.72** | F **.0027** | **-.0002** | **.0017** | **.0011** | F **.0005** | **-.0012** |
| #1 | .0000 | 28.74 | .0029 | -.0003 | .0013 | .0014 | .0003 | -.0010 |
| #2 | -.0001 | 28.70 | .0025 | -.0001 | .0021 | .0007 | .0006 | -.0013 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **8.587** | **8.676** | **.0003** | **.0014** | **-.0004** | **2.722** | **-.0004** | **.0001** |
| #1 | 8.579 | 8.700 | .0003 | .0015 | -.0005 | 2.709 | -.0011 | .0002 |
| #2 | 8.595 | 8.651 | .0002 | .0012 | -.0003 | 2.735 | .0002 | .0000 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **11.28** | **.0000** | **.0053** | F **.0021** | F **.0025** | **.2379** | **19.45** | **-.0001** |
| #1 | 11.33 | -.0001 | .0053 | .0020 | .0024 | .2363 | 19.48 | .0000 |
| #2 | 11.22 | .0000 | .0052 | .0022 | .0026 | .2395 | 19.42 | -.0001 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0006** | **.0001** | **.13596** | **.0045** | **6.728** |
| #1 | -.0005 | .0000 | .13667 | .0059 | 6.722 |
| #2 | -.0008 | .0002 | .13526 | .0031 | 6.735 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5614.5 | 114710. | 7062.2 | 1453.6 |
| #1 | 5602.9 | 114510. | 7080.9 | 1449.5 |
| #2 | 5626.2 | 114910. | 7043.6 | 1457.8 |

9/24/10

Sample Name: K1010073-001D Acquired: 9/23/2010 19:22:26 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0017** | F **.0002** | **-.0037** | **.0017** | **.0156** | **.00009** | F **.0240** | **.0000** |
| #1 | .0014 | .0005 | -.0048 | .0036 | .0156 | .00008 | .0235 | -.0001 |
| #2 | .0021 | .0000 | -.0026 | -.0002 | .0157 | .00009 | .0246 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **28.13** | F **.0028** | **.0002** | **.0013** | **.0017** | F **-.0013** | **-.0003** |
| #1 | .0000 | 28.13 | .0026 | .0002 | .0016 | .0022 | -.0007 | .0002 |
| #2 | -.0001 | 28.12 | .0029 | .0002 | .0011 | .0013 | -.0020 | -.0007 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **8.477** | **8.681** | **.0002** | **.0011** | **-.0002** | **2.688** | **-.0009** | **.0007** |
| #1 | 8.415 | 8.670 | .0002 | .0010 | -.0003 | 2.720 | -.0006 | .0005 |
| #2 | 8.539 | 8.691 | .0002 | .0012 | -.0001 | 2.655 | -.0011 | .0009 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **11.25** | **.0002** | **.0052** | F **.0027** | F **.0031** | **.2367** | **19.39** | **.0000** |
| #1 | 11.27 | .0009 | .0051 | .0028 | .0031 | .2384 | 19.26 | .0000 |
| #2 | 11.24 | -.0005 | .0052 | .0027 | .0031 | .2350 | 19.52 | -.0001 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0013** | **.0034** | **.13292** | **.0060** | **6.659** |
| #1 | -.0015 | .0022 | .13305 | .0050 | 6.648 |
| #2 | -.0012 | .0047 | .13279 | .0070 | 6.670 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5693.3** | **116730.** | **7134.0** | **1468.7** |
| #1 | 5688.3 | 116820. | 7129.9 | 1469.0 |
| #2 | 5698.3 | 116650. | 7138.2 | 1468.5 |

9/24/10

Sample Name: K1010073-001L Acquired: 9/23/2010 19:25:42 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/5

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0008** | F **-.0002** | **-.0022** | **.0004** | **.0036** | **.00003** | F **.0018** | **.0000** |
| #1 | .0007 | -.0019 | -.0010 | -.0009 | .0036 | .00006 | .0010 | .0000 |
| #2 | .0009 | .0014 | -.0035 | .0016 | .0037 | .00000 | .0026 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **5.668** | **5.619** | F **.0002** | **-.0002** | **.0008** | **.0011** | F **.0014** |
| #1 | .0000 | 5.685 | 5.605 | -.0002 | -.0003 | .0003 | .0024 | .0036 |
| #2 | -.0001 | 5.652 | 5.633 | .0007 | -.0002 | .0014 | -.0002 | -.0008 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | **1.736** | **1.753** | **.0001** | **-.0001** | **.0000** | **.4577** | **-.0012** |
| #1 | -.0005 | 1.738 | 1.757 | .0001 | .0000 | .0000 | .4633 | -.0011 |
| #2 | -.0004 | 1.734 | 1.748 | .0000 | -.0001 | .0000 | .4520 | -.0013 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **2.235** | **-.0001** | **.0012** | F **.0006** | F **.0006** | **.0468** | **3.755** |
| #1 | .0001 | 2.230 | .0002 | .0010 | .0006 | .0007 | .0435 | 3.757 |
| #2 | -.0007 | 2.239 | -.0004 | .0015 | .0006 | .0005 | .0500 | 3.753 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0006** | **.0027** | **.02658** | **.0022** | **1.356** |
| #1 | .0002 | -.0006 | .0015 | .02664 | .0008 | 1.353 |
| #2 | .0000 | -.0006 | .0038 | .02651 | .0036 | 1.358 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5743.8 | 117210. | 7158.2 | 1484.7 |
| #1 | 5749.3 | 117190. | 7177.1 | 1483.5 |
| #2 | 5738.3 | 117220. | 7139.3 | 1486.0 |

[illegible] 9/24/10

Sample Name: CCVA2 Acquired: 9/23/2010 19:28:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2491** | **.2316** | **.2465** | **.0006** | **.0008** | **.24666** | **.2454** | **.2490** |
| Stddev | .0018 | .0041 | .0020 | .0021 | .0002 | .00034 | .0019 | .0002 |
| %RSD | .7215 | 1.756 | .8109 | 332.3 | 29.09 | .13948 | .7698 | .0795 |
| #1 | .2504 | .2345 | .2450 | -.0008 | .0006 | .24642 | .2467 | .2491 |
| #2 | .2478 | .2287 | .2479 | .0021 | .0009 | .24691 | .2441 | .2488 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2487** | **.2440** | **.2441** | **.2487** | **.2492** | **.2500** | **.2481** | **.0000** |
| Stddev | .0006 | .0164 | .0006 | .0001 | .0003 | .0004 | .0014 | .0013 |
| %RSD | .2257 | 6.710 | .2384 | .0575 | .1190 | .1432 | .5594 | 2814. |
| #1 | .2491 | .2555 | .2446 | .2488 | .2490 | .2502 | .2491 | -.0009 |
| #2 | .2483 | .2324 | .2437 | .2486 | .2494 | .2497 | .2471 | .0010 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2480** | **.2556** | **.2486** | **.2480** | **.2452** | **.2527** | **.2470** | **.2487** |
| Stddev | .0001 | .0070 | .0008 | .0003 | .0007 | .0012 | .0005 | .0011 |
| %RSD | .0325 | 2.754 | .3293 | .1231 | .2798 | .4894 | .1983 | .4328 |
| #1 | .2481 | .2506 | .2492 | .2478 | .2447 | .2536 | .2474 | .2495 |
| #2 | .2480 | .2606 | .2480 | .2482 | .2457 | .2518 | .2467 | .2480 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA2 Acquired: 9/23/2010 19:28:42 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0358** | **.2464** | **.2505** | **-.0469** | **.2491** | **.2482** | **.2504** | **.2479** |
| Stddev | .0186 | .0019 | .0022 | .0072 | .0002 | .0005 | .0006 | .0012 |
| %RSD | 51.93 | .7610 | .8791 | 15.42 | .0755 | .1870 | .2311 | .4785 |
| #1 | -.0226 | .2477 | .2520 | -.0418 | .2492 | .2485 | .2500 | .2487 |
| #2 | -.0489 | .2450 | .2489 | -.0520 | .2489 | .2479 | .2508 | .2470 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0020** | **-.1101** | **.2486** | **.2479** | **.0016** | **.00013** | **-.0018** | **-.0331** |
| Stddev | .0008 | .0037 | .0003 | .0008 | .0003 | .00001 | .0014 | .0028 |
| %RSD | 40.48 | 3.387 | .1138 | .3046 | 17.79 | 9.7464 | 75.33 | 8.337 |
| #1 | -.0025 | -.1074 | .2484 | .2484 | .0014 | .00012 | -.0028 | -.0351 |
| #2 | -.0014 | -.1127 | .2488 | .2474 | .0018 | .00014 | -.0008 | -.0312 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5748.4 | 117350. | 7145.4 | 1477.4 |
| Stddev | 2.8 | 68. | 17.5 | 2.6 |
| %RSD | .04850 | .05803 | .24536 | .17595 |
| #1 | 5750.4 | 117400. | 7133.0 | 1479.2 |
| #2 | 5746.4 | 117310. | 7157.8 | 1475.5 |

Sample Name: CCVB2 Acquired: 9/23/2010 19:31:29 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.610** | **9.811** | **-.0013** | **.9995** | **9.934** | **.00014** | **-.0031** | **-.0001** |
| Stddev | .032 | .034 | .0022 | .0029 | .059 | .00002 | .0005 | .0000 |
| %RSD | .4136 | .3429 | 175.3 | .2924 | .5983 | 14.691 | 14.74 | 23.96 |
| #1 | 7.588 | 9.834 | -.0028 | .9975 | 9.892 | .00015 | -.0027 | -.0002 |
| #2 | 7.633 | 9.787 | .0003 | 1.002 | 9.976 | .00012 | -.0034 | -.0001 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **9.972** | **9.932** | **-.0002** | **.0001** | **.0005** | **-.0003** | **9.964** |
| Stddev | .0000 | .043 | .002 | .0000 | .0002 | .0003 | .0007 | .012 |
| %RSD | 194.0 | .4319 | .0149 | 5.216 | 240.8 | 51.06 | 258.5 | .1234 |
| #1 | .0000 | 10.00 | 9.931 | -.0002 | .0000 | .0003 | .0002 | 9.956 |
| #2 | .0000 | 9.942 | 9.933 | -.0002 | .0002 | .0007 | -.0008 | 9.973 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **10.01** | **9.859** | **9.980** | **.0004** | **-.0010** | **.0002** | **-.0006** |
| Stddev | .0001 | .05 | .077 | .088 | .0001 | .0001 | .0002 | .0001 |
| %RSD | 10.22 | .4880 | .7794 | .8791 | 23.63 | 7.877 | 132.4 | 23.55 |
| #1 | .0006 | 9.971 | 9.804 | 10.04 | .0005 | -.0009 | .0000 | -.0007 |
| #2 | .0005 | 10.04 | 9.913 | 9.918 | .0003 | -.0010 | .0003 | -.0005 |
| Check ? | None | Chk Pass | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB2 Acquired: 9/23/2010 19:31:29 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.919** | **-.0010** | **.0004** | **10.07** | **-.0001** | **.0003** | **-.0005** | **-.0003** |
| Stddev | .071 | .0003 | .0005 | .08 | .0003 | .0002 | .0001 | .0002 |
| %RSD | .7173 | 36.38 | 130.9 | .8231 | 304.7 | 63.59 | 14.60 | 58.01 |
| #1 | 9.970 | -.0012 | .0007 | 10.12 | -.0003 | .0005 | -.0005 | -.0005 |
| #2 | 9.869 | -.0007 | .0000 | 10.01 | .0001 | .0002 | -.0004 | -.0002 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.04** | **9.901** | **.0006** | **.0007** | **1.011** | **.99778** | **1.008** | **.9882** |
| Stddev | .03 | .061 | .0002 | .0019 | .004 | .00054 | .008 | .0017 |
| %RSD | .3151 | .6147 | 33.08 | 284.8 | .3801 | .05391 | .8271 | .1768 |
| #1 | 10.02 | 9.944 | .0004 | -.0007 | 1.014 | .99816 | 1.002 | .9894 |
| #2 | 10.06 | 9.858 | .0007 | .0020 | 1.009 | .99740 | 1.014 | .9870 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5659.0** | **115130.** | **7055.4** | **1461.2** |
| Stddev | 30.4 | 354. | 35.1 | 8.1 |
| %RSD | .53732 | .30782 | .49692 | .55304 |
| #1 | 5680.5 | 115380. | 7080.2 | 1466.9 |
| #2 | 5637.5 | 114880. | 7030.6 | 1455.5 |

Sample Name: CCB2 Acquired: 9/23/2010 19:35:34 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0001** | **-.0039** | **-.0003** | **.0006** | **.00013** | **-.0045** | **-.0001** |
| Stddev | .000 | .0038 | .0005 | .0006 | .0002 | .00000 | .0008 | .0000 |
| %RSD | 416.6 | 5803. | 11.85 | 211.4 | 37.22 | .46441 | 17.54 | 24.26 |
| #1 | .0001 | .0028 | -.0036 | .0001 | .0004 | .00013 | -.0050 | -.0001 |
| #2 | -.0001 | -.0026 | -.0042 | -.0007 | .0007 | .00013 | -.0039 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0004** | **.0003** | **-.0007** | **-.0002** | **.0008** | **.0001** | **-.0029** |
| Stddev | .0000 | .0021 | .0000 | .0003 | .0004 | .0005 | .0002 | .0007 |
| %RSD | 49.43 | 492.0 | 15.75 | 38.92 | 158.7 | 56.49 | 381.5 | 25.93 |
| #1 | .0001 | .0010 | .0003 | -.0009 | -.0005 | .0005 | .0002 | -.0034 |
| #2 | .0000 | -.0019 | .0002 | -.0005 | .0000 | .0011 | -.0001 | -.0023 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0082** | **.0003** | **.0007** | **.0000** | **.0001** | **-.0001** | **.0001** |
| Stddev | .0001 | .0009 | .0001 | .0013 | .0000 | .0000 | .0002 | .0001 |
| %RSD | 69.12 | 10.67 | 23.69 | 194.1 | 65.48 | 29.98 | 207.2 | 98.49 |
| #1 | .0001 | .0088 | .0004 | .0016 | .0000 | .0001 | -.0002 | .0002 |
| #2 | .0003 | .0076 | .0003 | -.0002 | .0000 | .0001 | .0000 | .0000 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB2 Acquired: 9/23/2010 19:35:34 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0774** | **-.0013** | **.0007** | **-.0304** | **.0001** | **-.0001** | **.0000** | **-.0001** |
| Stddev | .0291 | .0006 | .0004 | .0089 | .0003 | .0003 | .0000 | .0002 |
| %RSD | 37.55 | 49.59 | 55.55 | 29.19 | 209.5 | 218.5 | 1617. | 199.8 |
| #1 | -.0569 | -.0008 | .0010 | -.0367 | -.0001 | -.0003 | .0000 | -.0002 |
| #2 | -.0980 | -.0017 | .0004 | -.0241 | .0003 | .0001 | .0000 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0050** | F **-.1157** | **.0002** | **-.0007** | **.0028** | **-.00014** | **.0038** | **-.0003** |
| Stddev | .0045 | .0058 | .0003 | .0002 | .0023 | .00009 | .0007 | .0049 |
| %RSD | 88.96 | 5.036 | 107.1 | 33.15 | 82.29 | 63.452 | 19.30 | 1496. |
| #1 | .0019 | -.1115 | .0001 | -.0008 | .0045 | -.00008 | .0033 | -.0038 |
| #2 | .0082 | -.1198 | .0004 | -.0005 | .0012 | -.00020 | .0043 | .0031 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5720.9 | 118400. | 7038.3 | 1462.8 |
| Stddev | 5.9 | 444. | 21.9 | 3.0 |
| %RSD | .10232 | .37511 | .31127 | .20622 |
| #1 | 5725.1 | 118720. | 7022.9 | 1464.9 |
| #2 | 5716.8 | 118090. | 7053.8 | 1460.6 |

Sample Name: K1010073-001S Acquired: 9/23/2010 19:37:57 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.975** | **.4883** | **.9369** | **2.037** | **.04863** | **.9621** | **.0499** | **.0501** |
| #1 | 1.970 | .4873 | .9378 | 2.031 | .04846 | .9634 | .0499 | .0500 |
| #2 | 1.980 | .4893 | .9360 | 2.043 | .04879 | .9609 | .0500 | .0502 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **38.86** | **.2046** | **.5055** | **.2482** | **.2544** | **1.005** | **.5068** | F **18.99** |
| #1 | 38.71 | .2049 | .5035 | .2469 | .2542 | 1.002 | .5065 | 18.99 |
| #2 | 39.01 | .2044 | .5074 | .2494 | .2546 | 1.009 | .5071 | 18.98 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.4987** | **.9654** | **.4955** | F **13.04** | **.8885** | **.0495** | F **21.77** | **.0003** |
| #1 | .4988 | .9643 | .4949 | 13.10 | .8889 | .0495 | 21.79 | .0004 |
| #2 | .4986 | .9664 | .4961 | 12.98 | .8880 | .0495 | 21.75 | .0001 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.5215** | **.5107** | **.4996** | **.2431** | **19.47** | **.0003** | **.9683** | **.0029** |
| #1 | .5222 | .5092 | .5009 | .2399 | 19.52 | .0004 | .9634 | .0012 |
| #2 | .5208 | .5121 | .4983 | .2464 | 19.41 | .0002 | .9732 | .0045 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.13526** | **-.0018** | **6.698** |
| #1 | .13467 | -.0041 | 6.714 |
| #2 | .13584 | .0005 | 6.683 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5589.7** | **114820.** | **7041.7** | **1436.8** |
| #1 | 5599.0 | 114650. | 7070.9 | 1440.8 |
| #2 | 5580.3 | 114990. | 7012.4 | 1432.9 |

WWR 9/24/10

Sample Name: K1010073-002 Acquired: 9/23/2010 19:41:42 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0027** | F **.0001** | **-.0009** | **.0017** | **.0153** | **.00005** | F **.0214** | **-.0001** |
| #1 | .0025 | .0003 | -.0017 | .0027 | .0155 | .00003 | .0214 | -.0001 |
| #2 | .0029 | -.0002 | -.0001 | .0007 | .0150 | .00008 | .0214 | -.0001 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | F **27.16** | F **.0007** | **.0005** | **.0013** | **.0003** | F **-.0015** | **-.0015** |
| #1 | .0000 | 27.19 | .0008 | .0006 | .0016 | .0000 | -.0029 | -.0017 |
| #2 | -.0001 | 27.13 | .0006 | .0005 | .0010 | .0005 | -.0001 | -.0013 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **8.525** | **8.876** | **.0008** | **.0008** | **-.0012** | **2.938** | **.0010** | **.0003** |
| #1 | 8.555 | 8.878 | .0008 | .0010 | -.0011 | 2.935 | .0004 | .0002 |
| #2 | 8.495 | 8.874 | .0008 | .0007 | -.0012 | 2.940 | .0016 | .0004 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.839** | **-.0002** | **.0051** | F **.0020** | F **.0023** | **.2052** | **22.32** | **.0001** |
| #1 | 7.834 | .0000 | .0051 | .0020 | .0023 | .2031 | 22.40 | .0000 |
| #2 | 7.844 | -.0005 | .0051 | .0020 | .0023 | .2074 | 22.24 | .0001 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0014** | **.0032** | **.12641** | **.0050** | **4.877** |
| #1 | -.0014 | .0031 | .12635 | .0069 | 4.870 |
| #2 | -.0014 | .0033 | .12646 | .0031 | 4.884 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5696.6 | 116560. | 7158.2 | 1471.9 |
| #1 | 5698.4 | 116770. | 7147.2 | 1470.8 |
| #2 | 5694.8 | 116340. | 7169.2 | 1472.9 |

9/24/10

Sample Name: K1010073-002D Acquired: 9/23/2010 19:44:58 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0023** | F **-.0003** | **-.0014** | **.0025** | **.0163** | **.00004** | F **.0193** | **.0000** |
| #1 | .0025 | .0008 | .0000 | .0026 | .0164 | .00003 | .0190 | .0000 |
| #2 | .0021 | -.0014 | -.0028 | .0024 | .0163 | .00005 | .0196 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **27.58** | F **.0009** | **.0006** | **.0025** | **.0019** | F **.0005** | **.0004** |
| #1 | .0001 | 27.59 | .0009 | .0004 | .0023 | .0017 | .0022 | .0003 |
| #2 | .0000 | 27.58 | .0009 | .0008 | .0026 | .0021 | -.0011 | .0006 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **8.737** | **8.839** | **.0011** | **.0009** | **-.0011** | **2.882** | **.0017** | **.0007** |
| #1 | 8.772 | 8.808 | .0011 | .0010 | -.0009 | 2.899 | .0017 | .0006 |
| #2 | 8.701 | 8.871 | .0011 | .0008 | -.0012 | 2.864 | .0016 | .0008 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.809** | **-.0002** | **.0047** | F **.0024** | F **.0027** | **.2071** | **22.13** | **-.0001** |
| #1 | 7.795 | -.0006 | .0047 | .0025 | .0027 | .2066 | 22.08 | -.0002 |
| #2 | 7.823 | .0003 | .0047 | .0023 | .0027 | .2076 | 22.19 | .0000 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **.0039** | **.12833** | **.0037** | **4.926** |
| #1 | .0006 | .0034 | .12841 | .0020 | 4.921 |
| #2 | -.0015 | .0044 | .12825 | .0054 | 4.932 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5637.9 | 115950. | 7076.4 | 1462.2 |
| #1 | 5653.2 | 115960. | 7055.5 | 1466.0 |
| #2 | 5622.7 | 115950. | 7097.2 | 1458.3 |

cmmk 9/24/10

Sample Name: K1010073-002S Acquired: 9/23/2010 19:48:14 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.918** | **.4771** | **.9019** | **1.997** | **.04779** | **.9269** | **.0486** | **.0486** |
| #1 | 1.910 | .4772 | .9047 | 1.994 | .04767 | .9263 | .0491 | .0490 |
| #2 | 1.926 | .4769 | .8992 | 1.999 | .04790 | .9275 | .0482 | .0481 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **37.12** | **.1980** | **.4923** | **.2426** | **.2489** | **.9818** | **.4933** | F **18.71** |
| #1 | 37.08 | .1981 | .4956 | .2444 | .2481 | .9789 | .4973 | 18.74 |
| #2 | 37.16 | .1979 | .4890 | .2407 | .2497 | .9848 | .4893 | 18.67 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.4885** | **.9275** | **.4807** | F **12.88** | **.8579** | **.0483** | F **17.91** | **-.0003** |
| #1 | .4872 | .9345 | .4845 | 12.90 | .8597 | .0485 | 17.93 | -.0005 |
| #2 | .4897 | .9204 | .4770 | 12.87 | .8560 | .0481 | 17.89 | -.0001 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.5102** | **.4893** | **.4750** | **.2012** | **21.70** | **.0002** | **.9326** | **.0042** |
| #1 | .5096 | .4926 | .4759 | .2020 | 21.71 | .0003 | .9402 | .0056 |
| #2 | .5107 | .4860 | .4741 | .2004 | 21.70 | .0001 | .9251 | .0027 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.12624** | **-.0021** | **4.745** |
| #1 | .12618 | -.0030 | 4.750 |
| #2 | .12630 | -.0011 | 4.741 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5630.9** | **114870.** | **7005.2** | **1442.8** |
| #1 | 5601.8 | 114490. | 7023.3 | 1433.3 |
| #2 | 5659.9 | 115240. | 6987.1 | 1452.2 |

WWR 9/24/10

Sample Name: K1010073-003 Acquired: 9/23/2010 19:51:58 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | F **-.0043** | **-.0019** | **.0002** | **.0393** | **.00010** | F **.0452** | **.0000** |
| #1 | .0011 | -.0007 | -.0016 | .0000 | .0390 | .00009 | .0449 | .0000 |
| #2 | .0007 | -.0080 | -.0022 | .0005 | .0395 | .00011 | .0455 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **64.09** | F **.0000** | **.0017** | **.0098** | **.0092** | F **.0140** | **-.0006** |
| #1 | .0000 | 64.17 | .0000 | .0019 | .0098 | .0093 | .0146 | -.0006 |
| #2 | .0000 | 64.02 | -.0001 | .0014 | .0097 | .0091 | .0133 | -.0007 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **17.24** | **1.465** | **.0032** | **.0124** | **5.395** | **-.0027** | **.0000** | F **25.25** |
| #1 | 17.16 | 1.462 | .0034 | .0128 | 5.314 | -.0035 | -.0001 | 25.15 |
| #2 | 17.31 | 1.469 | .0030 | .0121 | 5.476 | -.0018 | .0002 | 25.35 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0057** | F **.0023** | F **.0026** | **.1771** | **17.96** | **-.0004** | **-.0009** |
| #1 | .0006 | .0054 | .0023 | .0026 | .1738 | 17.85 | -.0005 | -.0008 |
| #2 | -.0005 | .0060 | .0023 | .0027 | .1805 | 18.08 | -.0003 | -.0010 |

| Elem | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0022** | **.32947** | **.0051** | **>10.00** |
| #1 | .0019 | .32956 | .0050 | 31.57 |
| #2 | .0026 | .32937 | .0052 | 31.62 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5659.4 | 115620. | 7053.5 | 1441.0 |
| #1 | 5665.6 | 115420. | 7009.5 | 1441.3 |
| #2 | 5653.2 | 115820. | 7097.5 | 1440.8 |

cmmk 9/24/10

Sample Name: K1010073-004 Acquired: 9/23/2010 19:55:49 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0116** | F **.0073** | **-.0027** | **.0011** | **.0677** | **.00007** | F **.0241** | **.0000** |
| #1 | .0114 | .0066 | -.0027 | .0019 | .0683 | .00010 | .0245 | .0000 |
| #2 | .0118 | .0080 | -.0028 | .0002 | .0671 | .00004 | .0237 | .0000 |

| Elem | Cd2265 | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **51.95** | F **.0010** | **.0044** | **.0043** | **.0036** | **.8566** | **-.0008** |
| #1 | .0002 | 52.12 | .0007 | .0043 | .0041 | .0037 | .8579 | -.0012 |
| #2 | .0001 | 51.79 | .0012 | .0046 | .0045 | .0035 | .8552 | -.0004 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **15.52** | **5.838** | **.0047** | **.0082** | **2.005** | **-.0012** | **.0007** | F **13.93** |
| #1 | 15.56 | 5.826 | .0049 | .0080 | 2.044 | -.0025 | .0006 | 13.96 |
| #2 | 15.48 | 5.850 | .0045 | .0084 | 1.965 | .0001 | .0007 | 13.91 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0007** | **.0057** | **.0232** | **.0227** | **.1598** | **14.35** | **.0000** | **-.0010** |
| #1 | -.0006 | .0056 | .0231 | .0225 | .1621 | 14.29 | -.0002 | -.0013 |
| #2 | -.0007 | .0057 | .0233 | .0229 | .1575 | 14.41 | .0002 | -.0007 |

| Elem | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0038** | **.26543** | **.0067** | **>10.00** |
| #1 | .0021 | .26656 | .0055 | 33.40 |
| #2 | .0056 | .26429 | .0080 | 33.51 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5609.3 | 114850. | 7008.0 | 1437.2 |
| #1 | 5605.7 | 115260. | 6985.7 | 1435.1 |
| #2 | 5612.9 | 114450. | 7030.3 | 1439.4 |

cmm 9/24/10

Sample Name: K1010576-MB Acquired: 9/23/2010 20:00:29 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0025** | **.0011** | **-.0019** | **-.0011** | **.0002** | **.00003** | **-.0046** | **-.0001** |
| #1 | .0022 | .0014 | -.0017 | -.0003 | .0004 | .00007 | -.0044 | -.0002 |
| #2 | .0028 | .0008 | -.0022 | -.0019 | .0000 | .00000 | -.0048 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0029** | **.0096** | **.0002** | **-.0005** | **.0004** | **.0005** | F **.0259** |
| #1 | .0000 | .0068 | .0096 | .0001 | -.0005 | .0003 | .0004 | .0240 |
| #2 | -.0001 | -.0009 | .0095 | .0004 | -.0005 | .0006 | .0005 | .0278 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0010** | **.0029** | **.0003** | **-.0001** | **.0000** | **-.0560** | **.0004** |
| #1 | -.0004 | .0010 | .0021 | .0003 | -.0002 | -.0001 | -.0653 | -.0006 |
| #2 | .0000 | .0010 | .0037 | .0003 | .0001 | .0000 | -.0466 | .0014 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0014** | **.0201** | **-.0001** | **.0008** | **.0011** | **.0170** | **-.1323** |
| #1 | .0005 | .0065 | .0202 | -.0004 | .0009 | .0013 | .0174 | -.1260 |
| #2 | -.0001 | -.0036 | .0201 | .0002 | .0007 | .0009 | .0167 | -.1386 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0015** | **.0013** | **-.00015** | **.0015** | **-.0092** |
| #1 | -.0001 | -.0023 | .0031 | -.00012 | .0020 | -.0065 |
| #2 | .0001 | -.0007 | -.0005 | -.00017 | .0011 | -.0120 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5677.1 | 116880. | 7066.1 | 1453.7 |
| #1 | 5691.4 | 116910. | 7070.0 | 1459.2 |
| #2 | 5662.9 | 116840. | 7062.1 | 1448.2 |

Sample Name: LCSW Acquired: 9/23/2010 20:03:25 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0018** | **.0026** | **-.0025** | **-.0004** | **.0000** | **.00006** | **-.0039** | **-.0001** |
| #1 | .0018 | .0018 | -.0028 | -.0014 | -.0004 | .00004 | -.0040 | -.0001 |
| #2 | .0017 | .0033 | -.0021 | .0007 | .0004 | .00009 | -.0037 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0003** | **.0105** | **.0002** | **-.0004** | **.0005** | **.0012** | **-.0017** |
| #1 | -.0001 | -.0039 | .0106 | .0000 | -.0002 | .0005 | .0009 | -.0009 |
| #2 | .0000 | .0032 | .0104 | .0004 | -.0005 | .0005 | .0015 | -.0026 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0021** | **.0020** | **.0002** | **.0000** | **.0001** | **-.0573** | **-.0019** |
| #1 | .0002 | .0021 | .0032 | .0002 | -.0001 | .0003 | -.0564 | -.0024 |
| #2 | -.0002 | .0021 | .0009 | .0002 | .0001 | .0000 | -.0583 | -.0014 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0220** | **.0215** | **-.0002** | **.0008** | **.0014** | **2.432** | **-.1422** |
| #1 | .0003 | -.0209 | .0213 | -.0007 | .0009 | .0016 | 2.432 | -.1368 |
| #2 | .0001 | -.0230 | .0217 | .0003 | .0007 | .0012 | 2.433 | -.1476 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0006** | **-.0017** | **-.00008** | **.0007** | **-.0066** |
| #1 | .0002 | -.0006 | -.0023 | -.00010 | .0010 | -.0036 |
| #2 | .0001 | -.0006 | -.0012 | -.00005 | .0004 | -.0097 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5746.5 | 117880. | 7082.3 | 1492.4 |
| #1 | 5757.1 | 117820. | 7062.2 | 1493.9 |
| #2 | 5736.0 | 117940. | 7102.4 | 1491.0 |

Sample Name: K1010576-001 Acquired: 9/23/2010 20:05:49 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1054** | **.1095** | **-.0030** | **.0029** | **.3709** | **.00003** | F **.0077** | **-.0001** |
| #1 | .1057 | .1101 | -.0037 | .0036 | .3711 | .00005 | .0088 | -.0001 |
| #2 | .1051 | .1088 | -.0022 | .0023 | .3706 | .00001 | .0066 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.3780** | **.3848** | F **.0007** | **.0000** | **.0008** | **.0011** | **.0512** |
| #1 | .0000 | .3767 | .3857 | .0009 | .0000 | .0010 | .0014 | .0519 |
| #2 | .0000 | .3793 | .3839 | .0005 | -.0001 | .0006 | .0008 | .0506 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **.2385** | **.2377** | **.0018** | **.0004** | **.0003** | **.4939** | **-.0010** |
| #1 | .0005 | .2391 | .2367 | .0018 | .0002 | .0003 | .4178 | -.0006 |
| #2 | .0000 | .2378 | .2386 | .0018 | .0005 | .0002 | .5700 | -.0014 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | F>**900.0** | **.0218** | **.0008** | F **.0020** | F **.0018** | **5.618** | **.5628** |
| #1 | .0000 | 1087. | .0221 | .0015 | .0021 | .0018 | 5.624 | .5699 |
| #2 | .0005 | 1090. | .0216 | .0001 | .0020 | .0019 | 5.612 | .5556 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9291** | **-.0016** | **.0036** | **.00914** | **.0038** | **5.428** |
| #1 | .9518 | -.0021 | .0020 | .00917 | .0027 | 5.457 |
| #2 | .9065 | -.0011 | .0051 | .00911 | .0048 | 5.399 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5357.3 | 107190. | 7029.5 | 1286.9 |
| #1 | 5366.8 | 107040. | 7013.7 | 1290.3 |
| #2 | 5347.8 | 107340. | 7045.4 | 1283.4 |

Sample Name: K1010576-001D Acquired: 9/23/2010 20:09:47 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1113** | **.1169** | **-.0024** | **.0014** | **.4107** | **.00008** | F **.0068** | **.0000** |
| #1 | .1104 | .1144 | -.0023 | .0014 | .4116 | .00006 | .0069 | -.0001 |
| #2 | .1123 | .1195 | -.0025 | .0014 | .4097 | .00010 | .0067 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.4608** | **.4712** | F **.0005** | **-.0001** | **.0011** | **.0004** | **.0440** |
| #1 | .0000 | .4518 | .4711 | .0004 | .0002 | .0009 | -.0003 | .0393 |
| #2 | .0001 | .4698 | .4714 | .0007 | -.0003 | .0013 | .0011 | .0486 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.2466** | **.2448** | **.0017** | **.0003** | **.0004** | **.5777** | **.0001** |
| #1 | -.0001 | .2465 | .2461 | .0017 | .0003 | .0005 | .5839 | -.0008 |
| #2 | -.0002 | .2467 | .2435 | .0017 | .0003 | .0003 | .5714 | .0011 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F>**900.0** | **.0234** | **.0009** | F **.0024** | F **.0024** | **5.797** | **.5036** |
| #1 | .0004 | 1094. | .0234 | .0007 | .0024 | .0024 | 5.796 | .5017 |
| #2 | -.0002 | 1095. | .0235 | .0011 | .0023 | .0024 | 5.798 | .5055 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9099** | **-.0009** | **.0029** | **.00963** | **.0039** | **5.608** |
| #1 | .9119 | .0003 | .0024 | .00978 | .0034 | 5.579 |
| #2 | .9078 | -.0021 | .0034 | .00948 | .0044 | 5.636 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5327.8** | **106980.** | **7040.8** | **1275.3** |
| #1 | 5339.5 | 106690. | 7053.0 | 1275.3 |
| #2 | 5316.2 | 107270. | 7028.7 | 1275.3 |

Sample Name: CCVA3 Acquired: 9/23/2010 20:13:45 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2489** | **.2317** | **.2481** | **.0010** | **.0009** | **.24645** | **.2432** | **.2512** |
| Stddev | .0002 | .0000 | .0010 | .0011 | .0000 | .00009 | .0024 | .0001 |
| %RSD | .0941 | .0214 | .3922 | 112.4 | 4.925 | .03581 | 1.003 | .0302 |
| #1 | .2491 | .2317 | .2488 | .0002 | .0009 | .24638 | .2449 | .2512 |
| #2 | .2488 | .2316 | .2474 | .0018 | .0010 | .24651 | .2414 | .2511 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2514** | **.2388** | **.2452** | **.2501** | **.2527** | **.2540** | **.2500** | **.0013** |
| Stddev | .0001 | .0009 | .0018 | .0013 | .0005 | .0000 | .0001 | .0018 |
| %RSD | .0228 | .3838 | .7438 | .5080 | .1888 | .0048 | .0529 | 135.5 |
| #1 | .2514 | .2381 | .2439 | .2492 | .2524 | .2541 | .2499 | .0001 |
| #2 | .2514 | .2394 | .2465 | .2510 | .2531 | .2540 | .2501 | .0026 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2513** | **.2597** | **.2505** | **.2506** | **.2456** | **.2520** | **.2493** | **.2503** |
| Stddev | .0012 | .0151 | .0009 | .0025 | .0004 | .0013 | .0008 | .0004 |
| %RSD | .4765 | 5.805 | .3435 | 1.003 | .1501 | .5329 | .3362 | .1410 |
| #1 | .2505 | .2490 | .2499 | .2524 | .2454 | .2529 | .2487 | .2501 |
| #2 | .2522 | .2704 | .2511 | .2488 | .2459 | .2510 | .2499 | .2506 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA3 Acquired: 9/23/2010 20:13:45 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1035** | **.2462** | **.2499** | **.2997** | **.2532** | **.2480** | **.2533** | **.2461** |
| Stddev | .0807 | .0016 | .0008 | .0011 | .0003 | .0013 | .0001 | .0002 |
| %RSD | 77.98 | .6353 | .3371 | .3659 | .1377 | .5418 | .0315 | .0769 |
| #1 | .0464 | .2450 | .2505 | .3004 | .2530 | .2471 | .2532 | .2459 |
| #2 | .1606 | .2473 | .2493 | .2989 | .2535 | .2490 | .2534 | .2462 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.1505** | **.2509** | **.2520** | **.0021** | **.00002** | **-.0020** | **-.0333** |
| Stddev | .0035 | .0068 | .0001 | .0005 | .0012 | .00008 | .0003 | .0021 |
| %RSD | 1453. | 4.492 | .0472 | .2078 | 57.72 | 399.26 | 16.23 | 6.419 |
| #1 | .0027 | -.1552 | .2508 | .2524 | .0012 | .00007 | -.0018 | -.0318 |
| #2 | -.0022 | -.1457 | .2510 | .2516 | .0029 | -.00003 | -.0023 | -.0348 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5704.3 | 116870. | 7084.4 | 1463.1 |
| Stddev | 7.2 | 198. | 51.4 | 2.5 |
| %RSD | .12599 | .16930 | .72546 | .17399 |
| #1 | 5699.2 | 117010. | 7120.7 | 1461.3 |
| #2 | 5709.4 | 116730. | 7048.0 | 1464.9 |

Sample Name: CCVB3 Acquired: 9/23/2010 20:16:33 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.461** | **9.888** | **-.0003** | **.9956** | **10.05** | **.00014** | **-.0049** | **-.0002** |
| Stddev | .053 | .030 | .0005 | .0013 | .09 | .00004 | .0003 | .0000 |
| %RSD | .7096 | .2998 | 148.8 | .1267 | .9240 | 32.965 | 6.609 | 3.349 |
| #1 | 7.424 | 9.867 | -.0007 | .9947 | 9.983 | .00010 | -.0046 | -.0002 |
| #2 | 7.498 | 9.909 | .0000 | .9965 | 10.11 | .00017 | -.0051 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **9.991** | **9.751** | **-.0002** | **.0004** | **.0004** | **-.0002** | **9.943** |
| Stddev | .000 | .004 | .055 | .0004 | .0003 | .0002 | .0007 | .035 |
| %RSD | 1352. | .0380 | .5669 | 235.1 | 81.67 | 57.88 | 415.2 | .3560 |
| #1 | -.0001 | 9.988 | 9.712 | .0001 | .0002 | .0002 | .0003 | 9.968 |
| #2 | .0001 | 9.994 | 9.790 | -.0004 | .0006 | .0006 | -.0006 | 9.918 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **10.14** | **10.00** | **10.07** | **.0004** | **.0002** | **.0003** | **-.0006** |
| Stddev | .0002 | .04 | .08 | .01 | .0001 | .0011 | .0001 | .0000 |
| %RSD | 415.5 | .4083 | .7556 | .1368 | 13.61 | 627.8 | 46.26 | 3.975 |
| #1 | -.0002 | 10.11 | 9.948 | 10.08 | .0004 | .0010 | .0002 | -.0007 |
| #2 | .0001 | 10.17 | 10.05 | 10.06 | .0004 | -.0006 | .0004 | -.0006 |
| Check ? | None | Chk Pass | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB3 Acquired: 9/23/2010 20:16:33 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.967** | **-.0010** | **.0005** | **10.09** | **.0003** | **.0005** | **-.0004** | **-.0003** |
| Stddev | .101 | .0003 | .0005 | .03 | .0002 | .0002 | .0001 | .0002 |
| %RSD | 1.012 | 25.87 | 83.36 | .2762 | 65.70 | 35.19 | 28.15 | 48.44 |
| #1 | 10.04 | -.0012 | .0002 | 10.07 | .0004 | .0004 | -.0005 | -.0002 |
| #2 | 9.896 | -.0008 | .0009 | 10.11 | .0002 | .0007 | -.0003 | -.0005 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.03** | **9.912** | **.0005** | **-.0005** | **1.012** | **.99792** | **1.003** | **.9774** |
| Stddev | .02 | .054 | .0001 | .0018 | .011 | .00016 | .005 | .0042 |
| %RSD | .1863 | .5424 | 16.83 | 339.1 | 1.053 | .01609 | .5499 | .4306 |
| #1 | 10.04 | 9.950 | .0005 | -.0018 | 1.020 | .99803 | .9990 | .9804 |
| #2 | 10.01 | 9.874 | .0004 | .0008 | 1.005 | .99781 | 1.007 | .9744 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5648.0 | 115340. | 7020.5 | 1449.0 |
| Stddev | 14.3 | 124. | 42.2 | 5.8 |
| %RSD | .25307 | .10727 | .60155 | .40047 |
| #1 | 5658.1 | 115430. | 7050.3 | 1453.1 |
| #2 | 5637.9 | 115250. | 6990.6 | 1444.9 |

Sample Name: CCB3 Acquired: 9/23/2010 20:21:19 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0024** | **-.0018** | **.0014** | **.0007** | **.00010** | **-.0063** | **.0000** |
| Stddev | .0003 | .0016 | .0026 | .0002 | .0008 | .00001 | .0000 | .000 |
| %RSD | 88.14 | 65.58 | 141.4 | 16.63 | 124.4 | 11.059 | .5926 | 97.90 |
| #1 | .0001 | -.0013 | .0000 | .0012 | .0012 | .00011 | -.0063 | -.0001 |
| #2 | .0006 | -.0035 | -.0037 | .0016 | .0001 | .00009 | -.0064 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0052** | **.0002** | **-.0004** | **-.0001** | **.0006** | **.0012** | **-.0049** |
| Stddev | .0000 | .0030 | .0001 | .0004 | .0004 | .0002 | .0003 | .0002 |
| %RSD | 40.47 | 58.35 | 40.91 | 111.4 | 452.8 | 31.60 | 25.14 | 4.213 |
| #1 | -.0001 | -.0030 | .0001 | -.0001 | -.0004 | .0007 | .0010 | -.0048 |
| #2 | -.0001 | -.0073 | .0002 | -.0006 | .0002 | .0005 | .0014 | -.0051 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0043** | **.0003** | **-.0008** | **.0000** | **-.0005** | **.0001** | **-.0002** |
| Stddev | .0004 | .0115 | .0001 | .0000 | .0001 | .0008 | .0000 | .0001 |
| %RSD | 106.6 | 264.3 | 27.93 | 1.332 | 213.7 | 140.2 | 50.24 | 78.33 |
| #1 | .0001 | .0038 | .0002 | -.0008 | .0000 | .0000 | .0001 | -.0001 |
| #2 | .0007 | -.0124 | .0003 | -.0008 | .0001 | -.0011 | .0001 | -.0003 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB3 Acquired: 9/23/2010 20:21:19 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0326** | **-.0014** | **.0002** | **.0741** | **.0000** | **.0004** | **.0000** | **.0001** |
| Stddev | .0273 | .0021 | .0005 | .0202 | .0007 | .0004 | .0001 | .0002 |
| %RSD | 83.74 | 153.6 | 263.1 | 27.33 | 15440. | 81.00 | 219.0 | 151.0 |
| #1 | -.0133 | .0001 | -.0002 | .0884 | .0005 | .0007 | .0000 | .0000 |
| #2 | -.0519 | -.0029 | .0005 | .0598 | -.0005 | .0002 | .0001 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | F **-.1493** | **.0002** | **.0001** | **.0013** | **-.00014** | **.0034** | **-.0013** |
| Stddev | .0007 | .0047 | .0003 | .0004 | .0016 | .00003 | .0021 | .0033 |
| %RSD | 378.7 | 3.155 | 159.1 | 616.3 | 127.3 | 19.209 | 62.09 | 261.9 |
| #1 | .0003 | -.1526 | .0000 | .0004 | .0025 | -.00016 | .0019 | -.0036 |
| #2 | -.0007 | -.1459 | .0004 | -.0002 | .0001 | -.00012 | .0048 | .0011 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5733.2 | 117340. | 7161.9 | 1465.3 |
| Stddev | 24.7 | 109. | 50.9 | 2.0 |
| %RSD | .43148 | .09296 | .71080 | .13967 |
| #1 | 5715.7 | 117420. | 7197.9 | 1463.8 |
| #2 | 5750.7 | 117260. | 7125.9 | 1466.7 |

Sample Name: K1010576-001L Acquired: 9/23/2010 20:23:41 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/10

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0214** | **.0222** | **-.0013** | **.0000** | **.0745** | **.00007** | F **-.0048** | **.0000** |
| #1 | .0210 | .0233 | -.0006 | .0003 | .0746 | .00008 | -.0046 | .0000 |
| #2 | .0217 | .0211 | -.0020 | -.0004 | .0743 | .00007 | -.0050 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0687** | **.0755** | F **-.0003** | **-.0001** | **.0003** | **-.0002** | F **.0057** |
| #1 | .0000 | .0723 | .0758 | -.0003 | .0000 | .0000 | .0003 | .0072 |
| #2 | .0000 | .0652 | .0751 | -.0003 | -.0002 | .0006 | -.0006 | .0042 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.0487** | **.0502** | **.0004** | **.0000** | **.0001** | F **.0792** | **-.0019** |
| #1 | .0006 | .0492 | .0492 | .0004 | -.0003 | .0001 | .1199 | .0001 |
| #2 | .0007 | .0482 | .0512 | .0004 | .0002 | .0001 | .0386 | -.0040 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | F **248.4** | **.0043** | **.0002** | F **.0004** | F **.0004** | **1.144** | **-.0106** |
| #1 | .0006 | 249.0 | .0042 | -.0001 | .0004 | .0004 | 1.147 | -.0029 |
| #2 | .0007 | 247.9 | .0044 | .0004 | .0004 | .0003 | 1.141 | -.0184 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1852** | **-.0001** | **.0023** | **.00157** | **.0035** | **1.093** |
| #1 | .1851 | -.0013 | .0024 | .00150 | .0037 | 1.100 |
| #2 | .1852 | .0012 | .0023 | .00165 | .0033 | 1.086 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5634.3 | 114490. | 7143.6 | 1408.2 |
| #1 | 5638.2 | 114280. | 7166.6 | 1408.2 |
| #2 | 5630.4 | 114700. | 7120.5 | 1408.3 |

Sample Name: K1010576-001S Acquired: 9/23/2010 20:27:42 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1029** | **.1077** | **-.0014** | **.0022** | **.3618** | **.00006** | F **.0043** | **-.0001** |
| #1 | .1026 | .1095 | -.0025 | .0029 | .3625 | .00001 | .0042 | -.0002 |
| #2 | .1031 | .1060 | -.0002 | .0016 | .3611 | .00011 | .0044 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.4358** | **.4491** | F **.0009** | **-.0001** | **.0006** | **.0004** | **.0352** |
| #1 | .0001 | .4420 | .4504 | .0006 | -.0001 | .0007 | .0003 | .0379 |
| #2 | .0000 | .4295 | .4478 | .0012 | -.0001 | .0005 | .0005 | .0325 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **.2449** | **.2436** | **.0016** | **.0003** | **.0004** | **.5689** | **.0016** |
| #1 | .0004 | .2454 | .2425 | .0016 | .0003 | .0005 | .5668 | .0006 |
| #2 | -.0013 | .2444 | .2446 | .0017 | .0004 | .0003 | .5710 | .0025 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | F>**900.0** | **.0229** | **.0006** | F **.0020** | F **.0019** | **8.228** | **.5204** |
| #1 | .0002 | 1105. | .0231 | .0007 | .0020 | .0020 | 8.211 | .5328 |
| #2 | .0007 | 1130. | .0227 | .0006 | .0019 | .0018 | 8.244 | .5079 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.8384** | **-.0036** | **.0029** | **.00914** | **.0028** | **5.451** |
| #1 | .8321 | -.0025 | .0015 | .00916 | .0036 | 5.441 |
| #2 | .8447 | -.0047 | .0044 | .00911 | .0020 | 5.461 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5314.7 | 106610. | 7023.8 | 1273.6 |
| #1 | 5318.0 | 106630. | 7011.2 | 1274.8 |
| #2 | 5311.5 | 106590. | 7036.4 | 1272.3 |

Sample Name: K1010576-002 Acquired: 9/23/2010 20:31:40 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1201** | **.1233** | **-.0045** | **.0021** | **.3533** | **.00009** | F **.0016** | **-.0001** |
| #1 | .1211 | .1245 | -.0044 | .0023 | .3539 | .00010 | .0015 | -.0001 |
| #2 | .1191 | .1221 | -.0047 | .0019 | .3526 | .00008 | .0016 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.6193** | **.6430** | F **.0037** | **-.0001** | **.0010** | **.0011** | **.0258** |
| #1 | -.0001 | .6237 | .6407 | .0038 | .0001 | .0005 | .0000 | .0268 |
| #2 | .0000 | .6150 | .6454 | .0036 | -.0003 | .0014 | .0022 | .0247 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **.2807** | **.2811** | **.0017** | **.0001** | **.0020** | **.7708** | **.0001** |
| #1 | .0001 | .2804 | .2809 | .0017 | .0000 | .0022 | .7561 | .0006 |
| #2 | .0009 | .2811 | .2814 | .0017 | .0001 | .0019 | .7856 | -.0004 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | F>**900.0** | **.0227** | **.0015** | F **.0024** | F **.0023** | **5.782** | **.6944** |
| #1 | -.0001 | 1091. | .0229 | .0017 | .0026 | .0023 | 5.777 | .6939 |
| #2 | .0007 | 1082. | .0225 | .0013 | .0022 | .0023 | 5.786 | .6949 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.107** | **-.0012** | **.0028** | **.01005** | **.0026** | **3.798** |
| #1 | 1.127 | -.0023 | .0039 | .00993 | .0015 | 3.802 |
| #2 | 1.086 | -.0001 | .0017 | .01017 | .0036 | 3.794 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5364.4 | 107360. | 7055.7 | 1284.4 |
| #1 | 5366.7 | 107270. | 7043.8 | 1283.9 |
| #2 | 5362.2 | 107450. | 7067.5 | 1285.0 |

Sample Name: K1010576-003 Acquired: 9/23/2010 20:35:39 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1712** | **.1817** | **-.0013** | **.0025** | **.3790** | **-.00002** | F **.0033** | **.0000** |
| #1 | .1711 | .1829 | -.0015 | .0016 | .3782 | .00002 | .0035 | .0000 |
| #2 | .1712 | .1805 | -.0011 | .0033 | .3798 | -.00006 | .0032 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.6509** | **.6585** | F **.0005** | **-.0003** | **.0007** | **.0011** | F **.0144** |
| #1 | .0001 | .6546 | .6564 | .0004 | -.0004 | .0006 | .0013 | .0144 |
| #2 | .0002 | .6472 | .6607 | .0007 | -.0002 | .0008 | .0009 | .0145 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **.2924** | **.2942** | **.0018** | **.0003** | **.0005** | **.7071** | **.0007** |
| #1 | .0000 | .2917 | .2932 | .0018 | .0004 | .0005 | .7091 | .0007 |
| #2 | -.0010 | .2931 | .2951 | .0018 | .0003 | .0004 | .7051 | .0007 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F>**900.0** | **.0229** | **.0017** | F **.0025** | F **.0022** | **6.206** | **.8813** |
| #1 | .0003 | 1081. | .0229 | .0016 | .0024 | .0022 | 6.198 | .8903 |
| #2 | .0000 | 1058. | .0230 | .0017 | .0025 | .0022 | 6.214 | .8723 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.655** | **-.0010** | **.0022** | **.01128** | **.0036** | **4.906** |
| #1 | 1.651 | -.0006 | .0032 | .01118 | .0027 | 4.906 |
| #2 | 1.659 | -.0014 | .0012 | .01139 | .0045 | 4.906 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5343.1** | **107670.** | **7063.3** | **1280.3** |
| #1 | 5352.0 | 108000. | 7057.1 | 1283.1 |
| #2 | 5334.3 | 107340. | 7069.6 | 1277.4 |

Sample Name: K1010576-004 Acquired: 9/23/2010 20:39:38 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1153** | **.1148** | **-.0032** | **.0016** | **.0067** | **.00008** | F **.0039** | **.0000** |
| #1 | .1148 | .1145 | -.0048 | .0009 | .0066 | .00012 | .0046 | .0000 |
| #2 | .1157 | .1150 | -.0016 | .0022 | .0068 | .00004 | .0032 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.2447** | **.2441** | **.0069** | **.0000** | **.0005** | **.0004** | **.0210** |
| #1 | -.0001 | .2401 | .2436 | .0070 | .0001 | .0003 | .0007 | .0206 |
| #2 | -.0001 | .2494 | .2446 | .0068 | -.0001 | .0007 | .0001 | .0214 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.5125** | **.5074** | **.0013** | **.0007** | **-.0008** | **.5901** | **-.0011** |
| #1 | -.0007 | .5117 | .5060 | .0013 | .0007 | -.0008 | .5882 | -.0008 |
| #2 | .0003 | .5134 | .5089 | .0013 | .0006 | -.0008 | .5920 | -.0014 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | F>**900.0** | **.0220** | **.0003** | F **.0015** | F **.0015** | **5.889** | **17.01** |
| #1 | .0002 | 1402. | .0215 | .0000 | .0016 | .0015 | 5.887 | 16.97 |
| #2 | .0001 | 1394. | .0226 | .0007 | .0015 | .0014 | 5.890 | 17.05 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0572** | **-.0025** | **.0050** | **.00158** | **.0032** | >**10.00** |
| #1 | .0564 | -.0022 | .0043 | .00154 | .0002 | 538.8 |
| #2 | .0580 | -.0029 | .0056 | .00163 | .0062 | 537.8 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5289.4 | 104810. | 6948.4 | 1254.0 |
| #1 | 5297.3 | 104680. | 6960.0 | 1258.7 |
| #2 | 5281.6 | 104950. | 6936.7 | 1249.4 |

Sample Name: K1010576-005 Acquired: 9/23/2010 20:43:37 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1336** | **.1382** | **-.0033** | **.0028** | **.0070** | **.00005** | F **-.0001** | **.0000** |
| #1 | .1325 | .1378 | -.0034 | .0023 | .0070 | .00003 | .0004 | .0000 |
| #2 | .1346 | .1386 | -.0033 | .0034 | .0069 | .00006 | -.0005 | -.0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.3024** | **.3055** | F **.0004** | **-.0001** | **.0007** | **.0000** | **.0634** |
| #1 | .0000 | .3044 | .3046 | .0004 | -.0001 | .0007 | -.0002 | .0622 |
| #2 | -.0001 | .3003 | .3063 | .0004 | -.0001 | .0008 | .0002 | .0647 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | **.1583** | **.1560** | **.0013** | **.0004** | **-.0013** | **.6294** | **-.0005** |
| #1 | -.0004 | .1581 | .1555 | .0013 | .0004 | -.0011 | .6316 | -.0012 |
| #2 | -.0005 | .1584 | .1564 | .0013 | .0004 | -.0015 | .6273 | .0001 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | F>**900.0** | **.0211** | **.0004** | F **.0012** | F **.0010** | **5.382** | **23.05** |
| #1 | -.0001 | 1345. | .0210 | -.0002 | .0012 | .0009 | 5.390 | 22.97 |
| #2 | -.0005 | 1352. | .0213 | .0010 | .0012 | .0011 | 5.374 | 23.12 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0423** | **-.0002** | **.0043** | **.00174** | **.0035** | >**10.00** |
| #1 | .0428 | .0008 | .0037 | .00175 | .0040 | 510.8 |
| #2 | .0418 | -.0012 | .0048 | .00172 | .0030 | 511.2 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5295.1 | 104630. | 6945.6 | 1252.6 |
| #1 | 5302.7 | 104480. | 6940.2 | 1256.2 |
| #2 | 5287.5 | 104780. | 6951.0 | 1249.1 |

Sample Name: K1010576-006 Acquired: 9/23/2010 20:47:35 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1769** | **.1835** | **-.0048** | **.0001** | **.0100** | **.00002** | F **.0025** | **.0000** |
| #1 | .1773 | .1854 | -.0052 | .0004 | .0102 | .00004 | .0037 | .0000 |
| #2 | .1764 | .1815 | -.0044 | -.0002 | .0099 | -.00001 | .0012 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.6040** | **.5993** | F **.0006** | **-.0003** | **.0002** | **.0004** | **.0340** |
| #1 | .0000 | .6088 | .5998 | .0006 | -.0001 | .0005 | .0005 | .0350 |
| #2 | -.0001 | .5992 | .5989 | .0007 | -.0004 | -.0001 | .0002 | .0330 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.3487** | **.3505** | **.0013** | **.0005** | **-.0003** | **.6847** | **-.0032** |
| #1 | .0005 | .3487 | .3516 | .0013 | .0007 | -.0003 | .6941 | -.0031 |
| #2 | .0006 | .3487 | .3495 | .0012 | .0003 | -.0002 | .6753 | -.0032 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | F>**900.0** | **.0223** | **.0012** | F **.0015** | F **.0014** | **2.918** | **10.43** |
| #1 | .0003 | 1372. | .0221 | .0014 | .0015 | .0016 | 2.913 | 10.44 |
| #2 | .0002 | 1337. | .0225 | .0009 | .0014 | .0012 | 2.923 | 10.41 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0221** | **-.0016** | **.0039** | **.00327** | **.0059** | >**10.00** |
| #1 | .0220 | -.0013 | .0011 | .00324 | .0054 | 417.6 |
| #2 | .0222 | -.0020 | .0067 | .00331 | .0063 | 419.0 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5277.6 | 104820. | 7028.3 | 1251.7 |
| #1 | 5272.6 | 104630. | 7033.1 | 1249.6 |
| #2 | 5282.7 | 105020. | 7023.4 | 1253.9 |

Sample Name: K1008857-MB Acquired: 9/23/2010 20:53:02 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0025** | **.0010** | **-.0022** | **.0013** | **.0002** | **.00004** | **-.0064** | **-.0001** |
| #1 | .0022 | .0002 | -.0025 | .0007 | .0000 | .00006 | -.0061 | -.0001 |
| #2 | .0027 | .0018 | -.0018 | .0019 | .0003 | .00001 | -.0068 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0014** | **.0108** | **-.0001** | **-.0001** | **.0003** | **.0003** | **.0014** |
| #1 | -.0001 | -.0047 | .0111 | .0003 | .0000 | .0002 | .0004 | .0014 |
| #2 | .0000 | .0075 | .0106 | -.0004 | -.0002 | .0004 | .0002 | .0014 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **.0012** | **.0006** | **.0002** | **-.0001** | **.0000** | **.0790** | **.0013** |
| #1 | -.0003 | .0012 | .0010 | .0002 | -.0001 | .0002 | .0720 | .0014 |
| #2 | -.0003 | .0012 | .0003 | .0001 | .0000 | -.0001 | .0861 | .0012 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | F **.5403** | **.0216** | **.0001** | **.0010** | **.0014** | **.0201** | **-.1619** |
| #1 | .0004 | .5514 | .0214 | .0003 | .0010 | .0014 | .0194 | -.1631 |
| #2 | .0001 | .5292 | .0217 | -.0001 | .0010 | .0014 | .0208 | -.1606 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0018** | **.0025** | **-.00010** | **.0014** | **-.0090** |
| #1 | -.0003 | -.0012 | .0023 | -.00019 | -.0009 | -.0067 |
| #2 | .0000 | -.0023 | .0026 | .00000 | .0036 | -.0112 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5709.6 | 117600. | 7109.3 | 1463.0 |
| #1 | 5705.3 | 117790. | 7102.8 | 1466.9 |
| #2 | 5714.0 | 117400. | 7115.7 | 1459.1 |

Sample Name: LCSS Acquired: 9/23/2010 20:55:59 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **44.54** | **.3389** | **.4814** | **2.222** | **.30748** | **.5181** | **.4800** | **.4570** |
| #1 | 44.56 | .3390 | .4810 | 2.220 | .30749 | .5178 | .4804 | .4574 |
| #2 | 44.51 | .3388 | .4818 | 2.223 | .30748 | .5185 | .4795 | .4565 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **48.52** | **.7435** | **1.013** | **1.253** | **1.317** | **82.74** | **.6004** | **20.55** |
| #1 | 48.54 | .7455 | 1.014 | 1.253 | 1.315 | 82.94 | .6002 | 20.45 |
| #2 | 48.49 | .7415 | 1.012 | 1.254 | 1.319 | 82.54 | .6006 | 20.65 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.483** | **.3174** | **1.023** | **21.88** | **.9739** | **.4193** | **4.014** | **.7823** |
| #1 | 2.477 | .3174 | 1.024 | 21.83 | .9756 | .4181 | 3.997 | .7830 |
| #2 | 2.488 | .3174 | 1.022 | 21.93 | .9723 | .4204 | 4.030 | .7816 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9170** | **1.504** | **1.474** | **4.588** | **12.69** | **2.326** | **1.380** | **.0464** |
| #1 | .9209 | 1.506 | 1.477 | 4.597 | 12.75 | 2.333 | 1.381 | .0443 |
| #2 | .9131 | 1.502 | 1.471 | 4.578 | 12.63 | 2.318 | 1.378 | .0484 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.64842** | **-.0093** | **2.290** |
| #1 | .64800 | -.0069 | 2.299 |
| #2 | .64883 | -.0116 | 2.280 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 6015.4 | 122920. | 7522.7 | 1459.6 |
| #1 | 6025.0 | 122600. | 7502.7 | 1461.6 |
| #2 | 6005.7 | 123240. | 7542.6 | 1457.5 |

Sample Name: K1008857-001 Acquired: 9/23/2010 20:59:41 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **36.24** | **.0037** | **.0238** | **.4475** | **.00192** | F **.0324** | **.0046** | **.0064** |
| #1 | 36.33 | .0050 | .0236 | .4475 | .00192 | .0303 | .0045 | .0063 |
| #2 | 36.15 | .0024 | .0240 | .4475 | .00193 | .0345 | .0047 | .0065 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **20.92** | **.2683** | **.0299** | **.3256** | **.3417** | F **87.06** | **.5874** | F **22.34** |
| #1 | 20.96 | .2667 | .0297 | .3259 | .3418 | 87.49 | .5871 | 22.26 |
| #2 | 20.88 | .2699 | .0301 | .3253 | .3416 | 86.63 | .5876 | 22.41 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.235** | **.0052** | **.0909** | **6.158** | **.0042** | **.0036** | **8.476** | **.1185** |
| #1 | 1.237 | .0051 | .0904 | 6.218 | .0043 | .0039 | 8.471 | .1175 |
| #2 | 1.233 | .0052 | .0913 | 6.098 | .0041 | .0034 | 8.482 | .1196 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1347** | **1.045** | **1.019** | **4.712** | **12.22** | **1.604** | **-.0020** | **.0690** |
| #1 | .1340 | 1.045 | 1.018 | 4.716 | 12.42 | 1.614 | -.0005 | .0677 |
| #2 | .1354 | 1.045 | 1.021 | 4.708 | 12.01 | 1.595 | -.0035 | .0704 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.12918** | **.0067** | **>10.00** |
| #1 | .12940 | .0049 | 20.62 |
| #2 | .12895 | .0086 | 20.60 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5886.9 | 120480. | 7289.8 | 1456.2 |
| #1 | 5908.5 | 120320. | 7264.0 | 1458.2 |
| #2 | 5865.3 | 120640. | 7315.6 | 1454.2 |

Sample Name: CCVA4 Acquired: 9/23/2010 21:03:28 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2536** | **.2331** | **.2482** | **.0001** | **.0002** | **.24816** | **.2429** | **.2522** |
| Stddev | .0002 | .0012 | .0010 | .0006 | .0003 | .00023 | .0040 | .0008 |
| %RSD | .0798 | .5256 | .4145 | 429.7 | 196.3 | .09138 | 1.667 | .3318 |
| #1 | .2538 | .2339 | .2489 | .0006 | .0004 | .24800 | .2457 | .2516 |
| #2 | .2535 | .2322 | .2474 | -.0003 | -.0001 | .24833 | .2400 | .2528 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2526** | **.2497** | **.2497** | **.2517** | **.2538** | **.2542** | **.2506** | **-.0011** |
| Stddev | .0009 | .0043 | .0010 | .0000 | .0009 | .0007 | .0004 | .0004 |
| %RSD | .3547 | 1.727 | .3813 | .0046 | .3586 | .2889 | .1731 | 33.20 |
| #1 | .2519 | .2527 | .2490 | .2517 | .2532 | .2537 | .2509 | -.0014 |
| #2 | .2532 | .2466 | .2504 | .2516 | .2544 | .2547 | .2503 | -.0009 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2517** | **.2490** | **.2534** | **.2507** | **.2496** | **.2553** | **.2512** | **.2524** |
| Stddev | .0001 | .0304 | .0002 | .0013 | .0004 | .0020 | .0008 | .0002 |
| %RSD | .0537 | 12.21 | .0746 | .5152 | .1479 | .7675 | .3196 | .0917 |
| #1 | .2516 | .2705 | .2532 | .2516 | .2493 | .2567 | .2506 | .2523 |
| #2 | .2518 | .2275 | .2535 | .2498 | .2499 | .2539 | .2518 | .2526 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA4 Acquired: 9/23/2010 21:03:28 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0128** | **.2452** | **.2505** | **.1678** | **.2542** | **.2526** | **.2542** | **.2487** |
| Stddev | .0037 | .0029 | .0016 | .0079 | .0032 | .0005 | .0009 | .0007 |
| %RSD | 28.96 | 1.163 | .6220 | 4.686 | 1.266 | .2040 | .3546 | .2837 |
| #1 | -.0102 | .2472 | .2516 | .1622 | .2519 | .2530 | .2535 | .2492 |
| #2 | -.0155 | .2432 | .2494 | .1733 | .2565 | .2522 | .2548 | .2482 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0018** | **-.1546** | **.2539** | **.2530** | **.0026** | **.00001** | **-.0003** | **-.0351** |
| Stddev | .0016 | .0041 | .0001 | .0012 | .0033 | .00008 | .0003 | .0007 |
| %RSD | 91.52 | 2.643 | .0382 | .4739 | 124.5 | 740.98 | 116.6 | 2.048 |
| #1 | -.0029 | -.1517 | .2539 | .2522 | .0049 | -.00005 | .0000 | -.0356 |
| #2 | -.0006 | -.1575 | .2538 | .2538 | .0003 | .00007 | -.0005 | -.0346 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5685.2 | 116160. | 7085.2 | 1461.7 |
| Stddev | 15.5 | 530. | 29.7 | 4.1 |
| %RSD | .27282 | .45641 | .41886 | .28338 |
| #1 | 5696.1 | 116530. | 7106.2 | 1464.7 |
| #2 | 5674.2 | 115780. | 7064.2 | 1458.8 |

Sample Name: CCVB4 Acquired: 9/23/2010 21:06:15 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.451** | **9.771** | **-.0027** | **.9924** | **9.949** | **.00016** | **-.0058** | **-.0002** |
| Stddev | .052 | .001 | .0016 | .0023 | .039 | .00006 | .0014 | .0001 |
| %RSD | .7026 | .0105 | 58.51 | .2301 | .3882 | 38.499 | 24.42 | 31.36 |
| #1 | 7.414 | 9.770 | -.0038 | .9908 | 9.976 | .00011 | -.0068 | -.0001 |
| #2 | 7.488 | 9.771 | -.0016 | .9941 | 9.921 | .00020 | -.0048 | -.0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **9.887** | **9.743** | **-.0001** | **.0003** | **.0005** | **-.0003** | **9.844** |
| Stddev | .0001 | .011 | .045 | .0003 | .0001 | .0005 | .0002 | .018 |
| %RSD | 99.31 | .1158 | .4639 | 482.5 | 25.21 | 110.7 | 69.81 | .1877 |
| #1 | .0000 | 9.895 | 9.775 | .0001 | .0003 | .0001 | -.0005 | 9.857 |
| #2 | .0001 | 9.879 | 9.711 | -.0002 | .0004 | .0008 | -.0002 | 9.831 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **9.976** | **9.889** | **9.978** | **.0005** | **.0006** | **.0004** | **-.0006** |
| Stddev | .0007 | .041 | .004 | .010 | .0000 | .0013 | .0000 | .0001 |
| %RSD | 231.0 | .4155 | .0404 | .0991 | 6.199 | 204.9 | 6.337 | 13.74 |
| #1 | .0008 | 10.01 | 9.887 | 9.971 | .0005 | -.0003 | .0004 | -.0007 |
| #2 | -.0002 | 9.947 | 9.892 | 9.985 | .0005 | .0015 | .0003 | -.0006 |
| Check ? | None | Chk Pass | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB4 Acquired: 9/23/2010 21:06:15 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.845** | **-.0017** | **.0000** | **10.04** | **.0006** | **.0001** | **-.0005** | **-.0004** |
| Stddev | .008 | .0011 | .0010 | .02 | .0001 | .0002 | .0000 | .0001 |
| %RSD | .0771 | 66.45 | 39960. | .2100 | 25.84 | 227.7 | 1.325 | 20.93 |
| #1 | 9.839 | -.0025 | .0007 | 10.03 | .0007 | -.0001 | -.0005 | -.0004 |
| #2 | 9.850 | -.0009 | -.0007 | 10.06 | .0005 | .0002 | -.0005 | -.0005 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.976** | **9.850** | **.0005** | **.0009** | **1.005** | **.98276** | **.9889** | **.9667** |
| Stddev | .039 | .019 | .0001 | .0012 | .010 | .00005 | .0047 | .0084 |
| %RSD | .3890 | .1908 | 14.70 | 138.2 | .9970 | .00540 | .4723 | .8697 |
| #1 | 9.948 | 9.837 | .0006 | .0000 | .9984 | .98272 | .9856 | .9608 |
| #2 | 10.00 | 9.864 | .0005 | .0017 | 1.013 | .98280 | .9922 | .9726 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5715.0 | 116270. | 7074.0 | 1470.3 |
| Stddev | .2 | 525. | 36.5 | 3.4 |
| %RSD | .00425 | .45151 | .51558 | .23252 |
| #1 | 5714.8 | 115900. | 7048.2 | 1467.9 |
| #2 | 5715.2 | 116640. | 7099.7 | 1472.7 |

Sample Name: CCB4 Acquired: 9/23/2010 21:10:21 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | **-.0005** | **-.0030** | **.0012** | **.0009** | **.00009** | **-.0079** | **.0000** |
| Stddev | .0001 | .0010 | .0024 | .0009 | .0004 | .00001 | .0006 | .000 |
| %RSD | 11.27 | 185.0 | 79.56 | 77.19 | 45.57 | 7.1115 | 8.213 | 111.7 |
| #1 | .0008 | -.0012 | -.0013 | .0005 | .0012 | .00010 | -.0083 | .0000 |
| #2 | .0009 | .0002 | -.0047 | .0019 | .0006 | .00009 | -.0074 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0005** | **.0005** | **-.0004** | **.0000** | **.0003** | **-.0001** | **-.0017** |
| Stddev | .000 | .0016 | .0001 | .0004 | .000 | .0001 | .0001 | .0033 |
| %RSD | 76.43 | 316.4 | 12.49 | 89.99 | 510.7 | 29.01 | 67.88 | 196.4 |
| #1 | -.0001 | -.0017 | .0006 | -.0007 | .0000 | .0003 | -.0002 | -.0040 |
| #2 | .0000 | .0006 | .0005 | -.0001 | .0000 | .0004 | -.0001 | .0007 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **.0128** | **.0005** | **.0001** | **.0000** | **-.0004** | **.0001** | **.0000** |
| Stddev | .0007 | .0051 | .0000 | .0026 | .0001 | .0009 | .0002 | .000 |
| %RSD | 117.1 | 39.52 | 3.375 | 3321. | 252.9 | 216.9 | 213.6 | 1269. |
| #1 | .0001 | .0164 | .0005 | .0019 | .0000 | .0002 | .0000 | .0001 |
| #2 | .0011 | .0092 | .0006 | -.0017 | .0001 | -.0010 | .0002 | -.0002 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB4 Acquired: 9/23/2010 21:10:21 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0171** | **-.0021** | **.0002** | **.1105** | **-.0005** | **.0000** | **.0000** | **.0000** |
| Stddev | .1022 | .0003 | .0000 | .0101 | .0008 | .001 | .000 | .0000 |
| %RSD | 598.6 | 14.19 | 22.92 | 9.164 | 172.4 | 1994. | 735.7 | 237.8 |
| #1 | -.0552 | -.0023 | .0002 | .1176 | -.0010 | -.0004 | .0001 | .0000 |
| #2 | .0894 | -.0019 | .0002 | .1033 | .0001 | .0004 | -.0002 | .0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0016** | F **-.1481** | **.0004** | **-.0017** | **.0029** | **-.00007** | **.0040** | **-.0010** |
| Stddev | .0002 | .0080 | .0001 | .0001 | .0011 | .00024 | .0003 | .0023 |
| %RSD | 10.50 | 5.388 | 13.91 | 7.725 | 38.77 | 357.89 | 6.948 | 225.5 |
| #1 | .0017 | -.1537 | .0003 | -.0018 | .0037 | -.00023 | .0042 | -.0027 |
| #2 | .0015 | -.1424 | .0004 | -.0016 | .0021 | .00010 | .0038 | .0006 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5682.8 | 115990. | 7043.4 | 1456.4 |
| Stddev | 13.8 | 20. | 21.9 | 5.3 |
| %RSD | .24248 | .01763 | .31078 | .36299 |
| #1 | 5692.6 | 115970. | 7058.9 | 1452.7 |
| #2 | 5673.1 | 116000. | 7027.9 | 1460.2 |

Sample Name: K1008857-001D Acquired: 9/23/2010 21:12:44 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **33.90** | **.0021** | **.0282** | **.3631** | **.00167** | F **.0350** | **.0051** | **.0073** |
| #1 | 33.98 | .0030 | .0274 | .3642 | .00159 | .0356 | .0050 | .0072 |
| #2 | 33.83 | .0011 | .0291 | .3620 | .00174 | .0344 | .0052 | .0073 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **17.85** | **.3020** | **.0306** | **.3963** | **.4168** | F **104.2** | **.5400** | F **19.55** |
| #1 | 17.87 | .3024 | .0307 | .3946 | .4179 | 104.3 | .5378 | 19.58 |
| #2 | 17.82 | .3015 | .0306 | .3979 | .4157 | 104.2 | .5423 | 19.52 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.359** | **.0059** | **.1118** | **5.949** | **.0030** | **.0055** | F **9.614** | **.1307** |
| #1 | 1.360 | .0058 | .1114 | 5.998 | .0020 | .0054 | 9.641 | .1303 |
| #2 | 1.358 | .0059 | .1123 | 5.900 | .0041 | .0055 | 9.587 | .1311 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1033** | **1.151** | **1.150** | **4.700** | **15.23** | **1.412** | **-.0013** | **.0615** |
| #1 | .1030 | 1.148 | 1.149 | 4.700 | 15.41 | 1.419 | -.0023 | .0616 |
| #2 | .1036 | 1.154 | 1.150 | 4.700 | 15.05 | 1.405 | -.0004 | .0614 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.12790** | **.0101** | **>10.00** |
| #1 | .12789 | .0108 | 31.09 |
| #2 | .12791 | .0095 | 31.10 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5831.4 | 118870. | 7239.3 | 1469.9 |
| #1 | 5842.4 | 118980. | 7231.3 | 1475.5 |
| #2 | 5820.4 | 118750. | 7247.3 | 1464.2 |

Sample Name: K1008857-001L Acquired: 9/23/2010 21:16:31 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/10

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **6.988** | **-.0017** | **.0056** | **.0933** | **.00044** | F **-.0001** | **.0010** | **.0013** |
| #1 | 6.979 | -.0005 | .0055 | .0932 | .00042 | -.0008 | .0009 | .0013 |
| #2 | 6.997 | -.0030 | .0057 | .0934 | .00047 | .0006 | .0010 | .0013 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.392** | **4.426** | **.0564** | **.0061** | **.0677** | **.0695** | F **18.25** | **.1204** |
| #1 | 4.396 | 4.424 | .0561 | .0061 | .0672 | .0689 | 18.19 | .1203 |
| #2 | 4.388 | 4.429 | .0567 | .0061 | .0682 | .0700 | 18.31 | .1205 |

| Elem | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.511** | **4.497** | **.2610** | **.0010** | **.0195** | **1.289** | **-.0013** | **.0005** |
| #1 | 4.519 | 4.507 | .2602 | .0013 | .0193 | 1.298 | -.0008 | .0007 |
| #2 | 4.502 | 4.487 | .2618 | .0008 | .0197 | 1.280 | -.0017 | .0003 |

| Elem | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.751** | **.0239** | **.0286** | **.2181** | **.2155** | **.9739** | **2.439** | **.3390** |
| #1 | 1.744 | .0243 | .0286 | .2178 | .2162 | .9749 | 2.448 | .3341 |
| #2 | 1.759 | .0236 | .0285 | .2184 | .2148 | .9728 | 2.430 | .3438 |

| Elem | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0129** | **.02696** | **.0046** | **4.304** |
| #1 | .0006 | .0121 | .02692 | .0053 | 4.316 |
| #2 | -.0009 | .0138 | .02700 | .0039 | 4.291 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5712.2** | **116000.** | **7098.5** | **1467.1** |
| #1 | 5719.8 | 115750. | 7099.7 | 1469.4 |
| #2 | 5704.6 | 116260. | 7097.3 | 1464.7 |

Sample Name: K1008857-001S Acquired: 9/23/2010 21:19:41 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **48.08** | **.2380** | **.4972** | **2.387** | **.05184** | **.4843** | **.0563** | **.0555** |
| #1 | 48.05 | .2386 | .4970 | 2.382 | .05176 | .4815 | .0561 | .0555 |
| #2 | 48.10 | .2374 | .4974 | 2.392 | .05191 | .4871 | .0564 | .0554 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **26.34** | **.4535** | **.5294** | **.6500** | **.6831** | F **93.31** | **1.837** | F **31.93** |
| #1 | 26.29 | .4542 | .5287 | .6488 | .6796 | 93.14 | 1.833 | 32.05 |
| #2 | 26.39 | .4527 | .5301 | .6512 | .6867 | 93.47 | 1.840 | 31.81 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.824** | **.4619** | **.6050** | F **13.71** | **.4235** | **.0532** | F **14.19** | **.1333** |
| #1 | 1.836 | .4614 | .6050 | 13.75 | .4226 | .0531 | 14.21 | .1328 |
| #2 | 1.813 | .4625 | .6049 | 13.67 | .4245 | .0534 | 14.17 | .1337 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.6174** | **1.777** | **1.739** | **5.752** | **15.53** | **1.535** | **.4860** | **.0951** |
| #1 | .6223 | 1.774 | 1.737 | 5.758 | 15.71 | 1.549 | .4855 | .0949 |
| #2 | .6126 | 1.781 | 1.741 | 5.746 | 15.35 | 1.521 | .4865 | .0953 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.14575** | **.0005** | **>10.00** |
| #1 | .14553 | -.0008 | 19.26 |
| #2 | .14597 | .0018 | 19.24 |

No Ti Spike
[illegible] 9/24/10

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5904.1 | 120360. | 7388.0 | 1444.1 |
| #1 | 5906.3 | 119910. | 7423.0 | 1446.9 |
| #2 | 5901.9 | 120820. | 7353.1 | 1441.4 |

Sample Name: K1008857-001S Acquired: 9/23/2010 21:23:29 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **55.62** | **.0029** | **.0284** | **.4274** | **.00250** | **.0592** | **.0063** | **.0086** |
| #1 | 55.33 | .0032 | .0285 | .4273 | .00247 | .0600 | .0063 | .0086 |
| #2 | 55.90 | .0026 | .0284 | .4275 | .00252 | .0584 | .0063 | .0085 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **21.16** | **.2734** | **.0371** | **.5592** | **.5944** | F **106.7** | **.5694** | F **28.30** |
| #1 | 21.16 | .2730 | .0372 | .5586 | .5935 | 106.9 | .5689 | 28.27 |
| #2 | 21.17 | .2739 | .0371 | .5597 | .5953 | 106.4 | .5700 | 28.33 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.423** | **.0060** | **.1178** | F **10.29** | **.0040** | **.0063** | F **9.074** | **.1349** |
| #1 | 1.416 | .0059 | .1179 | 10.34 | .0037 | .0060 | 9.069 | .1349 |
| #2 | 1.430 | .0061 | .1178 | 10.25 | .0042 | .0066 | 9.079 | .1350 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1437** | **2.366** | **2.347** | **5.247** | **19.13** | **4.291** | **-.0013** | **.1013** |
| #1 | .1434 | 2.363 | 2.353 | 5.251 | 19.41 | 4.337 | -.0022 | .1025 |
| #2 | .1440 | 2.369 | 2.340 | 5.243 | 18.85 | 4.246 | -.0005 | .1000 |

| Elem | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **.14454** | **.0088** | **>10.00** |
| #1 | .14463 | .0073 | 21.44 |
| #2 | .14445 | .0104 | 21.30 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5914.8 | 120550. | 7353.2 | 1467.9 |
| #1 | 5920.0 | 120020. | 7347.7 | 1470.2 |
| #2 | 5909.6 | 121080. | 7358.7 | 1465.7 |

Sample Name: K1008857-002 Acquired: 9/23/2010 21:27:27 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B RD 1/2

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **43.86** | **-.0005** | **.0298** | **.6575** | **.00238** | F **.0157** | **.0157** | **.0166** |
| #1 | 43.89 | .0011 | .0308 | .6572 | .00238 | .0144 | .0157 | .0166 |
| #2 | 43.84 | -.0021 | .0289 | .6578 | .00238 | .0170 | .0157 | .0166 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **13.66** | **13.53** | **.4942** | **.0385** | **.5954** | **.6375** | F **77.19** | **1.365** |
| #1 | 13.65 | 13.60 | .4953 | .0383 | .5951 | .6379 | 77.03 | 1.364 |
| #2 | 13.67 | 13.45 | .4932 | .0387 | .5958 | .6370 | 77.34 | 1.365 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.83** | **4.169** | **.0055** | **.1324** | **3.469** | **.0049** | **.0173** | **1.331** |
| #1 | 12.81 | 4.173 | .0056 | .1322 | 3.457 | .0052 | .0176 | 1.337 |
| #2 | 12.85 | 4.165 | .0054 | .1325 | 3.481 | .0047 | .0170 | 1.325 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.3171** | **.1287** | **1.698** | **1.692** | **8.340** | **13.87** | **1.451** | **-.0003** |
| #1 | .3156 | .1286 | 1.696 | 1.695 | 8.337 | 13.83 | 1.457 | -.0002 |
| #2 | .3186 | .1287 | 1.700 | 1.689 | 8.343 | 13.90 | 1.446 | -.0003 |

| Elem | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0532** | **.09198** | **.0072** | **2.706** |
| #1 | .0531 | .09182 | .0067 | 2.708 |
| #2 | .0534 | .09214 | .0078 | 2.703 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **6052.6** | **123610.** | **7474.7** | **1489.6** |
| #1 | 6053.9 | 123800. | 7467.6 | 1489.4 |
| #2 | 6051.3 | 123410. | 7481.9 | 1489.8 |

Sample Name: CLP LOD Acquired: 9/23/2010 21:32:50 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0039** | F **.0025** | **.0062** | **.0163** | F **.0019** | **.00040** | F **.0007** | **.0011** |
| #1 | .0041 | .0034 | .0060 | .0158 | .0021 | .00039 | .0015 | .0010 |
| #2 | .0038 | .0016 | .0064 | .0168 | .0018 | .00041 | -.0001 | .0012 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0012** | F **-.0002** | **.0100** | F **.0024** | **.0011** | **.0088** | **.0082** | F **.0091** |
| #1 | .0012 | .0024 | .0100 | .0027 | .0010 | .0090 | .0084 | .0089 |
| #2 | .0011 | -.0029 | .0100 | .0020 | .0013 | .0086 | .0081 | .0094 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0159** | **.0018** | F **.0028** | **.0008** | **.0025** | **.0028** | **.2003** | **.0180** |
| #1 | .0159 | .0018 | .0034 | .0008 | .0025 | .0029 | .2117 | .0184 |
| #2 | .0160 | .0018 | .0022 | .0008 | .0025 | .0027 | .1889 | .0176 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0032** | F **.1145** | **.0080** | **.0038** | F **.0079** | F **.0081** | **.1513** | **-.0920** |
| #1 | .0027 | .1123 | .0085 | .0040 | .0080 | .0081 | .1517 | -.0915 |
| #2 | .0037 | .1166 | .0074 | .0035 | .0079 | .0080 | .1509 | -.0925 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0012** | **.0073** | **.0081** | **.00013** | **.0039** | **.0006** |
| #1 | .0009 | .0060 | .0091 | .00020 | .0043 | .0000 |
| #2 | .0015 | .0085 | .0070 | .00007 | .0036 | .0011 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5724.2 | 116970. | 7072.9 | 1470.6 |
| #1 | 5739.1 | 116550. | 7091.8 | 1473.6 |
| #2 | 5709.3 | 117390. | 7054.0 | 1467.7 |

Sample Name: CLP LOQ Acquired: 9/23/2010 21:35:47 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0544** | **.0487** | **.0483** | **.0991** | **.0055** | **.00478** | F **.0423** | **.0053** |
| #1 | .0538 | .0472 | .0492 | .0987 | .0057 | .00475 | .0417 | .0053 |
| #2 | .0550 | .0502 | .0474 | .0994 | .0053 | .00481 | .0429 | .0054 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0053** | **.0422** | **.0516** | F **.0048** | **.0100** | **.0106** | **.0095** | F **.0172** |
| #1 | .0053 | .0387 | .0514 | .0050 | .0101 | .0108 | .0095 | .0170 |
| #2 | .0054 | .0458 | .0518 | .0046 | .0100 | .0104 | .0095 | .0174 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0506** | **.0202** | **.0212** | **.0050** | **.0101** | **.0203** | **.3922** | **.0911** |
| #1 | .0509 | .0202 | .0220 | .0050 | .0102 | .0205 | .4116 | .0916 |
| #2 | .0504 | .0202 | .0204 | .0051 | .0100 | .0200 | .3728 | .0905 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0116** | **.2337** | **.0500** | **.0101** | F **.0099** | F **.0100** | **.2953** | **.2538** |
| #1 | .0116 | .2399 | .0503 | .0103 | .0099 | .0099 | .2948 | .2538 |
| #2 | .0116 | .2276 | .0498 | .0099 | .0100 | .0101 | .2957 | .2538 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0105** | **.2029** | **.0110** | **.00973** | **.0039** | **-.0017** |
| #1 | .0105 | .2020 | .0105 | .00984 | .0016 | -.0030 |
| #2 | .0106 | .2038 | .0115 | .00962 | .0061 | -.0005 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5663.0** | **115720.** | **7030.3** | **1462.1** |
| #1 | 5670.3 | 116260. | 7006.9 | 1462.5 |
| #2 | 5655.7 | 115180. | 7053.7 | 1461.7 |

Sample Name: 3050 LOD Acquired: 9/23/2010 21:38:41 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0134** | F **.0133** | **.0080** | **.0179** | F **.0018** | **.00063** | F **.0005** | **.0005** |
| #1 | .0139 | .0130 | .0092 | .0167 | .0016 | .00065 | .0007 | .0006 |
| #2 | .0130 | .0136 | .0069 | .0192 | .0019 | .00061 | .0003 | .0005 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | F **.0194** | **.0225** | F **.0040** | **.0041** | **.0066** | **.0076** | **.0408** |
| #1 | .0007 | .0207 | .0221 | .0037 | .0043 | .0062 | .0067 | .0387 |
| #2 | .0007 | .0181 | .0228 | .0044 | .0040 | .0070 | .0084 | .0429 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0078** | **.0152** | F **.0170** | **.0007** | **.0014** | **.0016** | **.3888** | **.0133** |
| #1 | .0084 | .0151 | .0186 | .0007 | .0015 | .0015 | .3910 | .0111 |
| #2 | .0072 | .0152 | .0153 | .0006 | .0014 | .0018 | .3866 | .0155 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0042** | **.8925** | **.0333** | **.0063** | F **.0065** | F **.0066** | **.0763** | **-.1552** |
| #1 | .0041 | .8958 | .0336 | .0062 | .0065 | .0068 | .0751 | -.1624 |
| #2 | .0043 | .8892 | .0329 | .0064 | .0065 | .0065 | .0776 | -.1481 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0011** | **.0071** | **.0113** | **.00028** | **.0037** | **-.0047** |
| #1 | .0013 | .0064 | .0137 | .00031 | .0037 | -.0079 |
| #2 | .0010 | .0078 | .0089 | .00026 | .0036 | -.0014 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5725.7 | 117500. | 7072.2 | 1477.4 |
| #1 | 5727.0 | 117320. | 7070.7 | 1479.3 |
| #2 | 5724.3 | 117680. | 7073.6 | 1475.5 |

Sample Name: 3050 LOQ  Acquired: 9/23/2010 21:41:37  Type: Unk
Method: 2010C Bi + S(v9)  Mode: CONC  Corr. Factor: 1.000000
User: admin  :  :  :
Comment: 092310B 1/2

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0582** | **.0526** | **.0501** | **.0988** | **.0064** | **.00481** | F **.0448** | **.0055** |
| #1 | .0581 | .0498 | .0515 | .0987 | .0059 | .00479 | .0442 | .0054 |
| #2 | .0582 | .0554 | .0488 | .0990 | .0069 | .00483 | .0454 | .0055 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0056** | **.0538** | **.0589** | **.0058** | **.0108** | **.0114** | **.0118** | F **.0196** |
| #1 | .0056 | .0568 | .0584 | .0056 | .0109 | .0114 | .0118 | .0187 |
| #2 | .0056 | .0509 | .0594 | .0059 | .0107 | .0114 | .0119 | .0205 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0524** | **.0217** | **.0217** | **.0053** | **.0105** | **.0214** | **.4124** | **.0939** |
| #1 | .0524 | .0217 | .0207 | .0053 | .0106 | .0216 | .4020 | .0952 |
| #2 | .0524 | .0216 | .0227 | .0052 | .0104 | .0213 | .4228 | .0925 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0120** | **.2378** | **.0715** | **.0105** | **.0105** | **.0106** | **.2122** | **.2309** |
| #1 | .0117 | .2350 | .0713 | .0105 | .0104 | .0106 | .2129 | .2324 |
| #2 | .0123 | .2405 | .0716 | .0106 | .0105 | .0106 | .2116 | .2295 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0107** | **.2095** | **.0111** | **.01021** | **.0029** | **-.0055** |
| #1 | .0106 | .2086 | .0116 | .01023 | .0035 | -.0053 |
| #2 | .0109 | .2103 | .0106 | .01020 | .0024 | -.0056 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5656.3** | **116240.** | **6999.1** | **1461.6** |
| #1 | 5663.4 | 116080. | 6998.4 | 1467.1 |
| #2 | 5649.1 | 116400. | 6999.7 | 1456.0 |

Sample Name: IDL-1 Acquired: 9/23/2010 21:44:32 Type: Unk
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B SET 3

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | F **.0009** | **.0000** | **.0011** | F **.0003** | **.00007** | F **-.0088** | **.0000** |
| #1 | .0002 | -.0002 | -.0012 | .0005 | .0004 | .00005 | -.0088 | .0000 |
| #2 | .0000 | .0019 | .0012 | .0017 | .0002 | .00009 | -.0089 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0071** | **.0003** | F **.0001** | **-.0001** | **.0003** | **.0001** | F **-.0049** |
| #1 | -.0001 | -.0110 | .0003 | .0000 | -.0002 | .0003 | .0001 | -.0003 |
| #2 | .0000 | -.0032 | .0002 | .0002 | -.0001 | .0003 | .0002 | -.0095 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0012** | **.0000** | F **.0014** | **.0000** | **.0000** | **.0000** | F **-.0200** | **-.0007** |
| #1 | .0013 | .0001 | .0029 | .0000 | -.0001 | .0001 | -.0199 | -.0009 |
| #2 | .0010 | .0000 | .0000 | .0000 | .0001 | -.0001 | -.0200 | -.0006 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0008** | F **.0270** | **-.0002** | **.0000** | F **.0001** | F **.0000** | **-.0002** | **-.1622** |
| #1 | .0004 | .0256 | -.0003 | .0000 | .0001 | .0000 | -.0021 | -.1646 |
| #2 | .0013 | .0283 | -.0002 | -.0001 | .0001 | .0000 | .0016 | -.1598 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0008** | **.0034** | **-.00013** | **.0043** | **-.0010** |
| #1 | -.0001 | -.0003 | .0006 | -.00014 | .0048 | .0006 |
| #2 | .0002 | -.0013 | .0062 | -.00011 | .0038 | -.0025 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5732.0** | **117620.** | **7082.9** | **1475.5** |
| #1 | 5739.1 | 118150. | 7071.6 | 1480.8 |
| #2 | 5724.8 | 117090. | 7094.2 | 1470.1 |

Sample Name: CCVA5 Acquired: 9/23/2010 21:46:54 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2567** | **.2315** | **.2511** | **.0006** | **.0007** | **.24619** | **.2404** | **.2493** |
| Stddev | .0048 | .0015 | .0008 | .0013 | .0002 | .00043 | .0014 | .0002 |
| %RSD | 1.887 | .6530 | .3289 | 205.6 | 26.77 | .17617 | .5722 | .0849 |
| #1 | .2601 | .2304 | .2505 | -.0003 | .0009 | .24588 | .2414 | .2495 |
| #2 | .2533 | .2326 | .2517 | .0015 | .0006 | .24650 | .2394 | .2492 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2496** | **.2401** | **.2495** | **.2501** | **.2496** | **.2481** | **.2486** | **-.0008** |
| Stddev | .0000 | .0041 | .0014 | .0001 | .0011 | .0011 | .0004 | .0036 |
| %RSD | .0036 | 1.692 | .5756 | .0425 | .4603 | .4605 | .1625 | 445.3 |
| #1 | .2496 | .2372 | .2505 | .2501 | .2487 | .2473 | .2488 | -.0034 |
| #2 | .2496 | .2429 | .2484 | .2500 | .2504 | .2489 | .2483 | .0018 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2479** | **.2329** | **.2496** | **.2460** | **.2479** | **.2503** | **.2497** | **.2499** |
| Stddev | .0002 | .0096 | .0002 | .0012 | .0000 | .0021 | .0002 | .0004 |
| %RSD | .0618 | 4.128 | .0995 | .5046 | .0023 | .8320 | .0800 | .1518 |
| #1 | .2480 | .2261 | .2494 | .2451 | .2479 | .2488 | .2498 | .2501 |
| #2 | .2478 | .2397 | .2497 | .2469 | .2479 | .2518 | .2495 | .2496 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA5 Acquired: 9/23/2010 21:46:54 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0319** | **.2474** | **.2504** | **.0353** | **.2473** | **.2514** | **.2481** | **.2519** |
| Stddev | .0009 | .0009 | .0005 | .0069 | .0006 | .0013 | .0010 | .0019 |
| %RSD | 2.793 | .3795 | .2091 | 19.64 | .2376 | .5064 | .4201 | .7404 |
| #1 | -.0325 | .2467 | .2508 | .0304 | .2469 | .2523 | .2473 | .2532 |
| #2 | -.0312 | .2480 | .2500 | .0402 | .2477 | .2505 | .2488 | .2506 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0017** | **-.1611** | **.2498** | **.2468** | **.0028** | **.00006** | **.0012** | **-.0323** |
| Stddev | .0006 | .0013 | .0006 | .0014 | .0004 | .00005 | .0004 | .0019 |
| %RSD | 35.87 | .8341 | .2339 | .5843 | 15.03 | 88.387 | 30.48 | 5.960 |
| #1 | .0022 | -.1620 | .2503 | .2478 | .0025 | .00002 | .0010 | -.0336 |
| #2 | .0013 | -.1601 | .2494 | .2458 | .0031 | .00010 | .0015 | -.0309 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5739.8 | 116950. | 7112.5 | 1483.9 |
| Stddev | 9.3 | 12. | 22.2 | 1.8 |
| %RSD | .16186 | .01061 | .31207 | .11969 |
| #1 | 5733.3 | 116940. | 7096.8 | 1482.7 |
| #2 | 5746.4 | 116950. | 7128.1 | 1485.2 |

Sample Name: CCVB5 Acquired: 9/23/2010 21:49:40 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.649** | **9.825** | **-.0030** | **.9942** | **10.03** | **.00016** | **-.0064** | **-.0001** |
| Stddev | .014 | .062 | .0017 | .0020 | .06 | .00001 | .0002 | .0000 |
| %RSD | .1881 | .6335 | 55.21 | .1972 | .5768 | 7.5424 | 3.615 | 11.86 |
| #1 | 7.639 | 9.781 | -.0042 | .9956 | 9.993 | .00015 | -.0066 | -.0001 |
| #2 | 7.659 | 9.869 | -.0019 | .9928 | 10.07 | .00016 | -.0063 | -.0001 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **9.879** | **9.957** | **.0000** | **-.0001** | **.0003** | **.0006** | **9.879** |
| Stddev | .000 | .040 | .111 | .0004 | .0001 | .0008 | .0007 | .049 |
| %RSD | 215.2 | .4021 | 1.118 | 1058. | 268.6 | 315.7 | 119.4 | .4921 |
| #1 | .0000 | 9.851 | 9.879 | -.0003 | -.0002 | .0008 | .0011 | 9.845 |
| #2 | -.0001 | 9.907 | 10.04 | .0004 | .0000 | -.0003 | .0001 | 9.914 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **9.963** | **9.909** | **9.895** | **.0005** | **-.0003** | **.0003** | **-.0005** |
| Stddev | .001 | .036 | .130 | .029 | .0000 | .0003 | .0000 | .0003 |
| %RSD | 8391. | .3647 | 1.315 | .2877 | 10.05 | 91.89 | 6.020 | 54.93 |
| #1 | -.0008 | 9.938 | 9.817 | 9.915 | .0005 | -.0001 | .0003 | -.0006 |
| #2 | .0008 | 9.989 | 10.00 | 9.875 | .0004 | -.0005 | .0003 | -.0003 |
| Check ? | None | Chk Pass | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB5 Acquired: 9/23/2010 21:49:40 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.884** | **-.0011** | **.0003** | **9.978** | **.0001** | **.0008** | **-.0004** | **-.0004** |
| Stddev | .026 | .0023 | .0002 | .036 | .0007 | .0000 | .0000 | .0000 |
| %RSD | .2640 | 217.3 | 51.22 | .3651 | 601.2 | 4.060 | 2.724 | 8.287 |
| #1 | 9.865 | -.0027 | .0002 | 10.00 | -.0004 | .0007 | -.0004 | -.0005 |
| #2 | 9.902 | .0006 | .0004 | 9.952 | .0006 | .0008 | -.0004 | -.0004 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.959** | **9.758** | **.0005** | **-.0003** | **.9977** | **.98726** | **1.000** | **.9836** |
| Stddev | .007 | .035 | .0000 | .0007 | .0007 | .00429 | .000 | .0075 |
| %RSD | .0719 | .3631 | .4518 | 297.4 | .0664 | .43464 | .0119 | .7636 |
| #1 | 9.964 | 9.783 | .0005 | -.0008 | .9982 | .98423 | 1.0000 | .9783 |
| #2 | 9.954 | 9.733 | .0005 | .0003 | .9973 | .99030 | 1.000 | .9889 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5687.6 | 116360. | 7045.0 | 1471.6 |
| Stddev | 15.1 | 370. | 38.9 | 4.2 |
| %RSD | .26612 | .31799 | .55196 | .28333 |
| #1 | 5698.3 | 116100. | 7072.5 | 1474.6 |
| #2 | 5676.9 | 116620. | 7017.5 | 1468.7 |

Sample Name: CCB5 Acquired: 9/23/2010 21:53:47 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0014** | **.0014** | **-.0018** | **.0030** | **.0009** | **.00012** | **-.0079** | **.0000** |
| Stddev | .0001 | .0039 | .0005 | .0017 | .0002 | .00003 | .0009 | .0000 |
| %RSD | 5.794 | 281.3 | 28.29 | 56.74 | 20.04 | 23.817 | 11.02 | 228.5 |
| #1 | .0014 | .0041 | -.0022 | .0018 | .0008 | .00014 | -.0073 | .0000 |
| #2 | .0015 | -.0014 | -.0015 | .0042 | .0010 | .00010 | -.0086 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0024** | **.0009** | **-.0003** | **.0000** | **.0004** | **.0000** | **-.0010** |
| Stddev | .0000 | .0066 | .0001 | .0002 | .0001 | .0000 | .001 | .0005 |
| %RSD | 67.52 | 280.7 | 14.35 | 71.19 | 331.5 | 3.635 | 1012. | 47.53 |
| #1 | .0000 | .0070 | .0008 | -.0002 | .0000 | .0004 | .0003 | -.0013 |
| #2 | .0000 | -.0023 | .0010 | -.0005 | .0001 | .0004 | -.0004 | -.0007 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0023** | **.0009** | **-.0011** | **.0001** | **.0001** | **.0000** | **.0000** |
| Stddev | .0006 | .0163 | .0000 | .0004 | .0001 | .0006 | .0001 | .000 |
| %RSD | 437.3 | 710.6 | .2806 | 34.90 | 114.1 | 967.7 | 182.3 | 381.5 |
| #1 | -.0003 | -.0138 | .0009 | -.0008 | .0001 | .0005 | .0001 | -.0002 |
| #2 | .0006 | .0092 | .0009 | -.0014 | .0000 | -.0004 | .0000 | .0001 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB5 Acquired: 9/23/2010 21:53:47 Type: QC
Method: 2010C Bi + S(v9) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: 092310B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0043** | **-.0010** | **.0008** | **.0255** | **-.0002** | **.0002** | **.0001** | **.0000** |
| Stddev | .0011 | .0016 | .0011 | .0075 | .0003 | .0009 | .0001 | .0002 |
| %RSD | 26.50 | 156.2 | 148.2 | 29.45 | 194.4 | 347.6 | 88.94 | 602.8 |
| #1 | -.0035 | .0001 | .0000 | .0308 | .0001 | .0009 | .0001 | -.0001 |
| #2 | -.0051 | -.0021 | .0016 | .0202 | -.0004 | -.0004 | .0002 | .0002 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 | Bi2230 | S_1820 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0021** | F **-.1557** | **.0001** | **-.0010** | **.0026** | **.00005** | **.0020** | **-.0053** |
| Stddev | .0007 | .0090 | .0001 | .0005 | .0022 | .00010 | .0015 | .0030 |
| %RSD | 32.60 | 5.775 | 42.31 | 53.49 | 84.70 | 201.51 | 75.21 | 56.86 |
| #1 | .0016 | -.1621 | .0001 | -.0006 | .0010 | -.00002 | .0031 | -.0032 |
| #2 | .0026 | -.1494 | .0002 | -.0014 | .0042 | .00012 | .0009 | -.0074 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .0500 | | | | | | |
| Low Limit | | -.0500 | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5654.8 | 116220. | 7006.1 | 1455.9 |
| Stddev | 20.2 | 98. | 12.7 | 5.0 |
| %RSD | .35652 | .08447 | .18136 | .34023 |
| #1 | 5669.1 | 116150. | 7015.1 | 1459.4 |
| #2 | 5640.6 | 116290. | 6997.2 | 1452.4 |

Service Request # K1008857 (HNO3)_____
Calibration _____090710C_____
QC in calibration__090710C_____
QC Service Request K1008775_____
STARLIMS Batch # 215618_____

# ICP-MS Data Review Form

| | Yes | No | NA |
|---|---|---|---|
| 1. Appropriate standardization completed | X | | |
| 2. ICV within 10 % of true value | X | | |
| 3. CCV's in control | X | | |
| 4. CCB's and/or ICB's below MRL | X | | |
| 5. Method blank below MRL | X | | |
| 6. LCS in control | X | | |
| 7. Spike and duplicate in control | X | | |
| 8. All analytes within instrument linear range | X | | |
| 9. Adequate rinse out time allowed | X | | |
| 10. Internal standards in control | X | | |
| 11. Interferences checked | X | | |
| 12. Se over MRL | | X | |
| 13. CRA run | X | | |
| 14. ICSA and ICSAB in control | X | | |
| 15. Serial dilution run | X | | |
| 16. Post spike in control | X | | |

Comments: Report Al, Ba, Mn, V, Zn, Ti/6010B.

Primary Review by _____ Date 9/7/10
Secondary Review by JPB Date 9/7/10
R:\icp\misc\data review forms\PQ ExCell review form

## Sample List

| Num | Label | Type | Weight | Volume | Dilution | Rack | Row | Column | Height |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Cal. Blk | Blank | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 2 | Cal. Stn | Fully Quant Standard | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 3 | ICV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 3 | 145 |
| 4 | CCV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 5 | ICB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 6 | CCB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 7 | SOIL CRA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 4 | 145 |
| 8 | ICSA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 5 | 145 |
| 9 | ICSAB | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 6 | 145 |
| 10 | K1008775-MB 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 1 | 145 |
| 11 | LCSS K1008775 1/100 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 2 | 145 |
| 12 | K1008775-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 3 | 145 |
| 13 | K1008775-001 1/5D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 4 | 145 |
| 14 | K1008775-001 1/25L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 5 | 145 |
| 15 | K1008775-001 1/5 +50A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 6 | 145 |
| 16 | K1008775-001 1/25S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 7 | 145 |
| 17 | K1008775-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 8 | 145 |
| 18 | CCV2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 19 | CCB2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 20 | K1008775-003 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 9 | 145 |
| 21 | K1008857-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 10 | 145 |
| 22 | K1008857-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 11 | 145 |
| 23 | K1008862-MB 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 12 | 145 |
| 24 | K1008862-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 2 | 145 |
| 25 | K1008862-001 1/5D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 3 | 145 |
| 26 | K1008862-001 1/25L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 4 | 145 |
| 27 | K1008862-001 1/5 +100A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 5 | 145 |
| 28 | K1008862-001 1/25S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 6 | 145 |
| 29 | LCSS K1008862 1/100 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 1 | 145 |
| 30 | CCV3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 31 | CCB3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 32 | K1008862-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 7 | 145 |
| 33 | K1008862-003 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 8 | 145 |
| 34 | K1008862-004 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 9 | 145 |
| 35 | K1008862-005 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 10 | 145 |
| 36 | K1008862-006 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 11 | 145 |
| 37 | K1008862-007 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 12 | 145 |
| 38 | K1008862-008 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 1 | 145 |
| 39 | K1008862-009 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 2 | 145 |
| 40 | K1008862-010 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 3 | 145 |
| 41 | K1008862-011 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 4 | 145 |
| 42 | CCV4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 43 | CCB4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 44 | K1008862-012 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 5 | 145 |
| 45 | K1008862-013 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 6 | 145 |
| 46 | K1008862-014 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 7 | 145 |
| 47 | K1008862-015 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 8 | 145 |
| 48 | K1008862-016 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 9 | 145 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49 | K1008862-017 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 10 | 145 |
| 50 | K1008862-018 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 11 | 145 |
| 51 | K1008862-019 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 12 | 145 |
| 52 | K1008862-020 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 4 | 1 | 145 |
| 53 | CCV5 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 54 | CCB5 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |

## Instrument Setup - Sample Configuration

| Sample | Configuration | Date |
|---|---|---|
| All Samples | acqmet11 | 7:17:39 9/7/10 |

## Instrument Setup - Configurations

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 7:17:39 9/7/10
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -500.00 |
| Lens1 | 5.00 |
| Lens2 | -75.00 |
| Lens3 | -25.00 |
| Pole Bias | 5.00 |
| Sampling Depth | 400.00 |
| Horizontal | 0.00 |
| Vertical | 70.00 |
| Cool | 13.00 |
| Auxiliary | 0.80 |
| Nebuliser | 0.82 |
| Forward power | 1,365.00 |
| HT1 Voltage | 1,900.00 |
| HT2 Voltage | 2,600.00 |
| D1 | -36.00 |
| Focus | 10.00 |

**ExCell Mass Calibration** **Date: 9/6/2010**

| Mass | Mass DAC | Peak Width (AMU) | Error (AMU) | Include | Masses in Tune Solution |
|---|---|---|---|---|---|
| 6.015 | 1297 | 0.715 | -0.01 | TRUE | |
| 7.016 | 1557 | 0.715 | -0.031 | TRUE | Li-7 |
| 9.012 | 2064 | 0.715 | -0.026 | TRUE | Be-9 |
| 23.985 | 5873 | 0.715 | -0.014 | TRUE | Mg-24 |
| 24.986 | 6126 | 0.664 | -0.007 | TRUE | Co-59 |
| 25.983 | 6380 | 0.715 | -0.008 | TRUE | In-115 |
| 26.982 | 6627 | 0.715 | 0.021 | TRUE | Ce-140 |
| 45.953 | 11465 | 0.766 | -0.007 | TRUE | Pb-208 |
| 51.94 | 12986 | 0.766 | 0.008 | TRUE | Bi-209 |
| 53.949 | 13493 | 0.766 | 0.026 | TRUE | U-238 |
| 55.935 | 14000 | 0.766 | 0.021 | TRUE | |
| 56.935 | 14260 | 0.766 | 0.001 | TRUE | |
| 57.934 | 14507 | 0.766 | 0.03 | TRUE | |
| 58.933 | 14754 | 0.766 | 0.059 | TRUE | |
| 69.925 | 17569 | 0.714 | -0.002 | TRUE | |
| 75.92 | 19090 | 0.714 | 0.022 | TRUE | |
| 112.904 | 28519 | 0.714 | -0.004 | TRUE | |
| 114.904 | 29026 | 0.714 | 0.005 | TRUE | |
| 118.903 | 30079 | 0.714 | -0.128 | FALSE | |
| 128.905 | 32601 | 0.714 | -0.023 | TRUE | |
| 131.905 | 33368 | 0.612 | -0.033 | TRUE | |
| 139.905 | 35402 | 0.663 | -0.013 | TRUE | |
| 141.908 | 35916 | 0.612 | -0.027 | TRUE | |
| 155.923 | 39484 | 0.663 | -0.011 | TRUE | |
| 205.974 | 52244 | 0.612 | -0.008 | TRUE | |
| 206.976 | 52497 | 0.561 | 0.001 | TRUE | |
| 207.977 | 52751 | 0.612 | 0.006 | TRUE | |
| 208.98 | 53011 | 0.612 | -0.01 | TRUE | |
| 238.051 | 60414 | 0.561 | 0.034 | TRUE | |

SHORT TERM STABILITY 09-06-10.vge

Excluded In Calib | Excluded In Results | Multi Element | Internal Standard | Standard Addition

**Uncorrected ICPS Per Mass**

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

| Run | Label | TimeStamp | 9Be | 7Li | 9Be | 59Co | 115In | 208Pb |
|---|---|---|---|---|---|---|---|---|
| 1 | Stability 09-06-2010 | 9/7/2010 7:28:58 AM | (P)0.333 | (P)20155.041 | (P)4796.639 | (P)46482.837 | (P)77965.581 | (P)36700.925 |
| 2 | Stability 09-06-2010 | 9/7/2010 7:30:13 AM | (P)0.000 | (P)19960.436 | (P)4786.969 | (P)45816.525 | (P)77995.218 | (P)36768.260 |
| 3 | Stability 09-06-2010 | 9/7/2010 7:31:29 AM | (P)0.333 | (P)19908.029 | (P)4758.792 | (P)44853.144 | (P)77331.977 | (P)36883.058 |
| 4 | Stability 09-06-2010 | 9/7/2010 7:32:44 AM | (P)0.167 | (P)19847.445 | (P)4717.445 | (P)44865.178 | (P)77457.271 | (P)37046.812 |
| 5 | Stability 09-06-2010 | 9/7/2010 7:33:59 AM | (P)0.000 | (P)19470.927 | (P)4754.291 | (P)44415.280 | (P)77503.222 | (P)37131.365 |
| | Mean of Stability 09-06 | 9/7/2010 7:28:58 AM | (P)0.167 | (P)19868.376 | (P)4762.827 | (P)45286.593 | (P)77650.654 | (P)36906.084 |
| | SD of Stability 09-06-20 | | (P)0.167 | (P)250.314 | (P)31.123 | (P)842.093 | (P)307.649 | (P)181.777 |
| | %RSD of Stability 09 | | (P)100.000 | (P)1.260 | (P)0.653 | (P)1.859 | (P)0.396 | (P)0.493 |

| Run | Label | TimeStamp | 209Bi | 205Hg | 238U |
|---|---|---|---|---|---|
| 1 | Stability 09-06-2010 | 9/7/2010 7:28:58 AM | (P)58144.097 | (P)0.000 | (P)62769.106 |
| 2 | Stability 09-06-2010 | 9/7/2010 7:30:13 AM | (P)58335.204 | (P)0.333 | (P)63526.621 |
| 3 | Stability 09-06-2010 | 9/7/2010 7:31:29 AM | (P)58553.599 | (P)0.000 | (P)64046.444 |
| 4 | Stability 09-06-2010 | 9/7/2010 7:32:44 AM | (P)59005.800 | (P)0.000 | (P)64451.249 |
| 5 | Stability 09-06-2010 | 9/7/2010 7:33:59 AM | (P)58897.848 | (P)0.167 | (P)64618.009 |
| | Mean of Stability 09-06 | 9/7/2010 7:28:58 AM | (P)58587.310 | (P)0.100 | (P)63882.286 |
| | SD of Stability 09-06-20 | | (P)364.931 | (P)0.149 | (P)751.269 |
| | %RSD of Stability 09 | | (P)0.623 | (P)149.071 | (P)1.176 |

**Instrument ID: K-ICP-MS-02**
**Experiment: 09-07-10C**
**Units: µg/L (ppb)**

**Method: EPA 6020**
**Analyst: Greg Jasper**
**STARLIMS #215618**

| **Sample Name:** | | **Cal. Blk** | | | **Mean** | **SD** | **%RSD** |
|---|---|---|---|---|---|---|---|
| **TimeStamp** | | **9/7/10 12:28** | | | | | |
| Arsenic | 75 | -0.0613 | 0.0601 | 0.0012 | **0** | 0.0607 | 0 |
| Beryllium | 9 | -0.0023 | 0.0001 | 0.0021 | **0** | 0.0022 | 0 |
| Cadmium | 111 | 0.002 | -0.001 | -0.001 | **0** | 0.0017 | 0 |
| Cadmium | 114 | -0.0012 | 0.0014 | -0.0002 | **0** | 0.0013 | 0 |
| Chromium | 52 | 0.0138 | -0.0062 | -0.0076 | **0** | 0.012 | 0 |
| Chromium | 53 | 0.0251 | 0.0006 | -0.0256 | **0** | 0.0254 | 0 |
| Cobalt | 59 | 0.0003 | 0.0002 | -0.0004 | **0** | 0.0004 | 0 |
| Copper | 63 | -0.0025 | -0.0003 | 0.0029 | **0** | 0.0027 | 0 |
| Copper | 65 | -0.0074 | 0.0016 | 0.0058 | **0** | 0.0067 | 0 |
| Lead | 206 | -0.0014 | 0.0005 | 0.0009 | **0** | 0.0012 | 0 |
| Lead | 207 | 0.002 | -0.0005 | -0.0016 | **0** | 0.0019 | 0 |
| Lead | 208 | -0.0001 | 0.0002 | -0.0001 | **0** | 0.0002 | 0 |
| Molybdenum | 95 | 0.0009 | 0.0018 | -0.0027 | **0** | 0.0024 | 0 |
| Molybdenum | 97 | -0.0019 | 0.0023 | -0.0003 | **0** | 0.0021 | 0 |
| Molybdenum | 98 | 0.0032 | -0.0005 | -0.0027 | **0** | 0.0029 | 0 |
| Nickel | 60 | -0.0025 | 0.0018 | 0.0007 | **0** | 0.0022 | 0 |
| Nickel | 62 | 0.0596 | -0.0228 | -0.0369 | **0** | 0.0521 | 0 |
| Selenium | 77 | 0.0655 | -0.0485 | -0.017 | **0** | 0.0589 | 0 |
| Selenium | 78 | 0.0038 | -0.0478 | 0.044 | **0** | 0.046 | 0 |
| Selenium | 82 | -0.1809 | 0.1845 | -0.0037 | **0** | 0.1827 | 0 |
| Thallium | 203 | 0.0009 | 0.0003 | -0.0012 | **0** | 0.0011 | 0 |
| Thallium | 205 | -0.0001 | 0.0003 | -0.0001 | **0** | 0.0002 | 0 |
| Zinc | 66 | -0.0032 | 0.0066 | -0.0035 | **0** | 0.0057 | 0 |
| Zinc | 67 | 0.0003 | 0.0141 | -0.0144 | **0** | 0.0142 | 0 |
| Zinc | 68 | 0.006 | 0.0081 | -0.0142 | **0** | 0.0123 | 0 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.015 | 0.977 | 1.009 | **1.015** | n/a | n/a |
| Gallium | 71 | 0.981 | 0.997 | 1.022 | **0.981** | n/a | n/a |
| Rhodium | 103 | 0.996 | 0.994 | 1.011 | **0.996** | n/a | n/a |
| Indium | 115 | 1.002 | 0.996 | 1.002 | **1.002** | n/a | n/a |
| Lutetium | 175 | 0.997 | 0.999 | 1.004 | **0.997** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | Cal. Stn | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:31 | | | | | |
| Arsenic | 75 | 24.39 | 25.67 | 24.94 | **25** | 0.6446 | 2.579 |
| Beryllium | 9 | 26.45 | 24.35 | 24.2 | **25** | 1.255 | 5.021 |
| Cadmium | 111 | 24.45 | 25.74 | 24.8 | **25** | 0.6679 | 2.671 |
| Cadmium | 114 | 24.28 | 25.85 | 24.87 | **25** | 0.7948 | 3.179 |
| Chromium | 52 | 24.91 | 25.44 | 24.65 | **25** | 0.4027 | 1.611 |
| Chromium | 53 | 24.81 | 25.42 | 24.77 | **25** | 0.3604 | 1.441 |
| Cobalt | 59 | 24.8 | 25.33 | 24.86 | **25** | 0.2913 | 1.165 |
| Copper | 63 | 24.78 | 25.43 | 24.79 | **25** | 0.3694 | 1.478 |
| Copper | 65 | 24.78 | 25.38 | 24.84 | **25** | 0.3328 | 1.331 |
| Lead | 206 | 24.04 | 25.9 | 25.06 | **25** | 0.9285 | 3.714 |
| Lead | 207 | 24.4 | 25.69 | 24.9 | **25** | 0.6512 | 2.605 |
| Lead | 208 | 24.14 | 25.86 | 25 | **25** | 0.8603 | 3.441 |
| Molybdenum | 95 | 24.39 | 25.52 | 25.09 | **25** | 0.5718 | 2.287 |
| Molybdenum | 97 | 24.37 | 25.49 | 25.15 | **25** | 0.5733 | 2.293 |
| Molybdenum | 98 | 24.33 | 25.47 | 25.2 | **25** | 0.5987 | 2.395 |
| Nickel | 60 | 24.92 | 25.31 | 24.76 | **25** | 0.2831 | 1.132 |
| Nickel | 62 | 25.19 | 25.11 | 24.7 | **25** | 0.2659 | 1.064 |
| Selenium | 77 | 24.73 | 25.74 | 24.53 | **25** | 0.6506 | 2.602 |
| Selenium | 78 | 24.62 | 25.47 | 24.92 | **25** | 0.4314 | 1.726 |
| Selenium | 82 | 24.28 | 25.96 | 24.76 | **25** | 0.8663 | 3.465 |
| Thallium | 203 | 24.07 | 25.61 | 25.32 | **25** | 0.8164 | 3.266 |
| Thallium | 205 | 24.25 | 25.44 | 25.31 | **25** | 0.6568 | 2.627 |
| Zinc | 66 | 24.61 | 25.44 | 24.95 | **25** | 0.4174 | 1.67 |
| Zinc | 67 | 24.58 | 25.22 | 25.2 | **25** | 0.3668 | 1.467 |
| Zinc | 68 | 24.49 | 25.45 | 25.06 | **25** | 0.4789 | 1.916 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.996 | 0.953 | 0.966 | **0.996** | n/a | n/a |
| Gallium | 71 | 0.984 | 1.014 | 1.018 | **0.984** | n/a | n/a |
| Rhodium | 103 | 0.972 | 1.002 | 0.999 | **0.972** | n/a | n/a |
| Indium | 115 | 0.976 | 1.009 | 0.985 | **0.976** | n/a | n/a |
| Lutetium | 175 | 0.969 | 1.002 | 0.988 | **0.969** | n/a | n/a |

**Instrument ID: K-ICP-MS-02**
**Experiment: 09-07-10C**
**Units: µg/L (ppb)**

**Method: EPA 6020**
**Analyst: Greg Jasper**
**STARLIMS #215618**

| **Sample Name:** | | **ICV1** | | | **Mean** | **SD** | **%RSD** |
|---|---|---|---|---|---|---|---|
| **TimeStamp** | | **9/7/10 12:35** | | | | | |
| Arsenic | 75 | 24.46 | 24.49 | 24.3 | **24.42** | 0.1014 | 0.4153 |
| Beryllium | 9 | 2.445 | 2.492 | 2.377 | **2.438** | 0.0578 | 2.369 |
| Cadmium | 111 | 12.34 | 12.33 | 12.41 | **12.36** | 0.0409 | 0.3309 |
| Cadmium | 114 | 12.49 | 12.42 | 12.19 | **12.37** | 0.1559 | 1.261 |
| Chromium | 52 | 9.54 | 9.508 | 9.471 | **9.506** | 0.0345 | 0.3633 |
| Chromium | 53 | 9.704 | 9.437 | 9.286 | **9.476** | 0.2119 | 2.236 |
| Cobalt | 59 | 24.13 | 24.01 | 23.86 | **24** | 0.1333 | 0.5552 |
| Copper | 63 | 12.23 | 12.04 | 12.07 | **12.11** | 0.1026 | 0.8472 |
| Copper | 65 | 12.22 | 12.22 | 12.1 | **12.18** | 0.0654 | 0.5366 |
| Lead | 206 | 23.39 | 22.88 | 22.54 | **22.94** | 0.4323 | 1.885 |
| Lead | 207 | 25.63 | 25.44 | 25.38 | **25.48** | 0.1292 | 0.5071 |
| Lead | 208 | 24.69 | 24.29 | 24.2 | **24.4** | 0.2608 | 1.069 |
| Molybdenum | 95 | 24.49 | 24.78 | 24.63 | **24.63** | 0.1474 | 0.5985 |
| Molybdenum | 97 | 24.57 | 24.93 | 24.93 | **24.81** | 0.2125 | 0.8566 |
| Molybdenum | 98 | 24.68 | 24.78 | 25.04 | **24.83** | 0.1895 | 0.7632 |
| Nickel | 60 | 24.17 | 23.89 | 23.86 | **23.97** | 0.1691 | 0.7052 |
| Nickel | 62 | 24.16 | 24.44 | 24 | **24.2** | 0.2226 | 0.9198 |
| Selenium | 77 | 24.71 | 24.58 | 25.26 | **24.85** | 0.3623 | 1.458 |
| Selenium | 78 | 24.14 | 24.19 | 24.36 | **24.23** | 0.1174 | 0.4844 |
| Selenium | 82 | 24.48 | 24.36 | 24.5 | **24.45** | 0.0746 | 0.3053 |
| Thallium | 203 | 24.98 | 24.95 | 24.83 | **24.92** | 0.0814 | 0.3268 |
| Thallium | 205 | 25.47 | 24.76 | 24.71 | **24.98** | 0.4258 | 1.704 |
| Zinc | 66 | 24.68 | 24.8 | 24.66 | **24.72** | 0.0775 | 0.3134 |
| Zinc | 67 | 27.76 | 28.09 | 27.83 | **27.9** | 0.1743 | 0.6249 |
| Zinc | 68 | 27.46 | 27.55 | 27.44 | **27.48** | 0.0602 | 0.2192 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.987 | 0.978 | 0.977 | **0.987** | n/a | n/a |
| Gallium | 71 | 1.016 | 1.038 | 1.048 | **1.016** | n/a | n/a |
| Rhodium | 103 | 1.018 | 1.029 | 1.034 | **1.018** | n/a | n/a |
| Indium | 115 | 1.01 | 1.017 | 1.006 | **1.01** | n/a | n/a |
| Lutetium | 175 | 1.002 | 0.986 | 0.986 | **1.002** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCV1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:38 | | | | | |
| Arsenic | 75 | 25.56 | 25.25 | 24.74 | **25.19** | 0.4153 | 1.649 |
| Beryllium | 9 | 25.28 | 25.12 | 24.55 | **24.98** | 0.3839 | 1.537 |
| Cadmium | 111 | 25.12 | 24.64 | 25.22 | **25** | 0.3078 | 1.231 |
| Cadmium | 114 | 25.3 | 24.75 | 25.17 | **25.08** | 0.287 | 1.145 |
| Chromium | 52 | 25.21 | 24.7 | 24.24 | **24.72** | 0.4868 | 1.969 |
| Chromium | 53 | 25.42 | 24.83 | 24.1 | **24.78** | 0.6581 | 2.656 |
| Cobalt | 59 | 25.31 | 24.69 | 24.22 | **24.74** | 0.5447 | 2.202 |
| Copper | 63 | 25.49 | 24.66 | 24.38 | **24.84** | 0.5737 | 2.309 |
| Copper | 65 | 25.56 | 24.83 | 24.59 | **25** | 0.505 | 2.02 |
| Lead | 206 | 24.92 | 24.81 | 24.9 | **24.87** | 0.0576 | 0.2317 |
| Lead | 207 | 25.05 | 25.02 | 25.08 | **25.05** | 0.0311 | 0.1242 |
| Lead | 208 | 25.15 | 25.01 | 25.08 | **25.08** | 0.0691 | 0.2754 |
| Molybdenum | 95 | 25.58 | 25.13 | 24.96 | **25.22** | 0.3186 | 1.263 |
| Molybdenum | 97 | 25.58 | 25.33 | 25.12 | **25.34** | 0.2268 | 0.8951 |
| Molybdenum | 98 | 25.32 | 25.16 | 25.22 | **25.23** | 0.0799 | 0.3165 |
| Nickel | 60 | 25.35 | 24.8 | 24.29 | **24.81** | 0.5345 | 2.154 |
| Nickel | 62 | 25.26 | 24.94 | 24.59 | **24.93** | 0.3322 | 1.332 |
| Selenium | 77 | 25.7 | 25.15 | 25.42 | **25.42** | 0.2767 | 1.088 |
| Selenium | 78 | 25.75 | 24.62 | 24.28 | **24.88** | 0.7714 | 3.1 |
| Selenium | 82 | 25.9 | 25.7 | 25.32 | **25.64** | 0.2917 | 1.138 |
| Thallium | 203 | 24.81 | 24.92 | 24.96 | **24.9** | 0.0793 | 0.3186 |
| Thallium | 205 | 24.74 | 25 | 25.04 | **24.93** | 0.1647 | 0.6608 |
| Zinc | 66 | 25.75 | 24.97 | 24.94 | **25.22** | 0.4601 | 1.824 |
| Zinc | 67 | 25.02 | 24.75 | 24.81 | **24.86** | 0.143 | 0.5751 |
| Zinc | 68 | 25.74 | 25.09 | 24.63 | **25.15** | 0.5567 | 2.214 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.004 | 1 | 0.971 | **1.004** | n/a | n/a |
| Gallium | 71 | 1.051 | 1.043 | 1.044 | **1.051** | n/a | n/a |
| Rhodium | 103 | 1.034 | 1.033 | 1.036 | **1.034** | n/a | n/a |
| Indium | 115 | 1.025 | 1.004 | 1.02 | **1.025** | n/a | n/a |
| Lutetium | 175 | 1.004 | 0.998 | 1.001 | **1.004** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | ICB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:46 | | | | | |
| Arsenic | 75 | 0.0118 | -0.0583 | 0.0044 | **-0.014** | 0.0385 | 274.7 |
| Beryllium | 9 | 0.0036 | 0.0068 | 0.0007 | **0.0037** | 0.003 | 81.63 |
| Cadmium | 111 | -0.0003 | 0.0035 | -0.0006 | **0.0009** | 0.0023 | 255.1 |
| Cadmium | 114 | 0.0006 | 0.0006 | 0.0005 | **0.0006** | 0 | 6.798 |
| Chromium | 52 | 0.0251 | -0.0256 | -0.0279 | **-0.0095** | 0.0299 | 316.5 |
| Chromium | 53 | -0.0073 | -0.027 | -0.0353 | **-0.0232** | 0.0144 | 62.09 |
| Cobalt | 59 | 0.0007 | 0.0004 | 0.0015 | **0.0008** | 0.0006 | 66.1 |
| Copper | 63 | -0.0006 | 0.0037 | -0.0116 | **-0.0028** | 0.0079 | 278.4 |
| Copper | 65 | -0.0008 | 0.0009 | -0.0006 | **-0.0001** | 0.0009 | 664.1 |
| Lead | 206 | 0.0034 | 0.0003 | -0.0011 | **0.0009** | 0.0023 | 263.7 |
| Lead | 207 | -0.0013 | 0.0002 | 0.0011 | **0** | 0.0012 | 5532 |
| Lead | 208 | 0.0018 | 0.0007 | -0.0003 | **0.0007** | 0.0011 | 141.5 |
| Molybdenum | 95 | 0.0215 | 0.0132 | 0.0146 | **0.0164** | 0.0044 | 26.92 |
| Molybdenum | 97 | 0.0159 | 0.0126 | 0.001 | **0.0098** | 0.0079 | 79.86 |
| Molybdenum | 98 | 0.0159 | 0.0143 | 0.0133 | **0.0145** | 0.0013 | 9.074 |
| Nickel | 60 | -0.0047 | -0.0064 | 0.0033 | **-0.0026** | 0.0052 | 200.5 |
| Nickel | 62 | 0.0364 | -0.0649 | 0.0654 | **0.0123** | 0.0684 | 555.7 |
| Selenium | 77 | -0.0844 | -0.1102 | 0.0235 | **-0.057** | 0.0709 | 124.3 |
| Selenium | 78 | -0.0558 | 0.028 | -0.1177 | **-0.0485** | 0.0731 | 150.6 |
| Selenium | 82 | -0.0508 | -0.325 | 0.0289 | **-0.1156** | 0.1856 | 160.5 |
| Thallium | 203 | 0.0018 | 0.0015 | 0.0048 | **0.0027** | 0.0018 | 66.24 |
| Thallium | 205 | 0.0026 | 0.0029 | 0.0033 | **0.0029** | 0.0004 | 12.31 |
| Zinc | 66 | 0.0029 | 0.0119 | 0.0097 | **0.0081** | 0.0047 | 57.63 |
| Zinc | 67 | -0.0106 | 0.038 | -0.021 | **0.0021** | 0.0315 | 1482 |
| Zinc | 68 | 0.0013 | 0.0007 | 0.0013 | **0.0011** | 0.0003 | 30.94 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.022 | 0.964 | 0.948 | **1.022** | n/a | n/a |
| Gallium | 71 | 0.984 | 0.979 | 1.013 | **0.984** | n/a | n/a |
| Rhodium | 103 | 0.997 | 1.002 | 1.02 | **0.997** | n/a | n/a |
| Indium | 115 | 0.996 | 0.994 | 1.02 | **0.996** | n/a | n/a |
| Lutetium | 175 | 1 | 1.002 | 0.989 | **1** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:48 | | | | | |
| Arsenic | 75 | -0.0536 | -0.0202 | -0.0275 | **-0.0338** | 0.0176 | 52 |
| Beryllium | 9 | 0.0014 | -0.0021 | 0.0021 | **0.0005** | 0.0022 | 470.5 |
| Cadmium | 111 | 0.0002 | -0.0001 | -0.0005 | **-0.0002** | 0.0003 | 219.7 |
| Cadmium | 114 | 0.0001 | 0.0006 | 0.0013 | **0.0007** | 0.0006 | 85.48 |
| Chromium | 52 | -0.0423 | -0.0106 | -0.027 | **-0.0266** | 0.0158 | 59.51 |
| Chromium | 53 | -0.0513 | -0.0414 | -0.0448 | **-0.0458** | 0.005 | 10.9 |
| Cobalt | 59 | -0.0007 | 0.0014 | -0.0002 | **0.0002** | 0.0011 | 671.3 |
| Copper | 63 | -0.0104 | 0.0057 | -0.0033 | **-0.0027** | 0.008 | 300 |
| Copper | 65 | -0.0164 | -0.0097 | 0.0073 | **-0.0062** | 0.0122 | 195.5 |
| Lead | 206 | -0.0003 | 0.0002 | 0.0014 | **0.0004** | 0.0009 | 208.8 |
| Lead | 207 | 0.0014 | 0.0006 | 0.0016 | **0.0012** | 0.0005 | 45.47 |
| Lead | 208 | -0.0004 | 0.0006 | 0.001 | **0.0004** | 0.0007 | 173.2 |
| Molybdenum | 95 | 0.0108 | 0.0081 | 0.0032 | **0.0073** | 0.0039 | 52.61 |
| Molybdenum | 97 | 0.0093 | 0.0068 | 0.0073 | **0.0078** | 0.0014 | 17.51 |
| Molybdenum | 98 | 0.0091 | 0.0073 | 0.0055 | **0.0073** | 0.0018 | 24.54 |
| Nickel | 60 | -0.0005 | 0.0005 | 0.0058 | **0.0019** | 0.0034 | 174.6 |
| Nickel | 62 | -0.0289 | 0.0392 | 0.0332 | **0.0145** | 0.0377 | 260.1 |
| Selenium | 77 | 0.0469 | -0.1479 | -0.1308 | **-0.0773** | 0.1078 | 139.6 |
| Selenium | 78 | -0.0674 | -0.0986 | -0.0948 | **-0.087** | 0.017 | 19.56 |
| Selenium | 82 | -0.1556 | -0.217 | -0.2339 | **-0.2022** | 0.0412 | 20.39 |
| Thallium | 203 | 0.0171 | 0.0011 | -0.0004 | **0.006** | 0.0097 | 163 |
| Thallium | 205 | 0.0188 | -0.0002 | 0.002 | **0.0069** | 0.0104 | 151.3 |
| Zinc | 66 | 0.0296 | 0.0103 | 0.0147 | **0.0182** | 0.0101 | 55.6 |
| Zinc | 67 | 0.0096 | -0.0078 | -0.0406 | **-0.0129** | 0.0255 | 197.3 |
| Zinc | 68 | 0.044 | -0.0023 | 0.0096 | **0.0171** | 0.0241 | 140.4 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.98 | 0.962 | 0.955 | **0.98** | n/a | n/a |
| Gallium | 71 | 1.012 | 1.054 | 1.065 | **1.012** | n/a | n/a |
| Rhodium | 103 | 1.014 | 1.04 | 1.043 | **1.014** | n/a | n/a |
| Indium | 115 | 1.009 | 1.038 | 1.042 | **1.009** | n/a | n/a |
| Lutetium | 175 | 1 | 1.016 | 1.031 | **1** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | SOIL CRA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:52 | | | | | |
| Arsenic | 75 | 0.9331 | 1.126 | 0.925 | **0.9946** | 0.1136 | 11.42 |
| Beryllium | 9 | 0.0384 | 0.0468 | 0.0404 | **0.0418** | 0.0044 | 10.56 |
| Cadmium | 111 | 0.039 | 0.0456 | 0.0411 | **0.0419** | 0.0034 | 8.084 |
| Cadmium | 114 | 0.0478 | 0.0486 | 0.0407 | **0.0457** | 0.0044 | 9.593 |
| Chromium | 52 | 0.4262 | 0.383 | 0.3653 | **0.3915** | 0.0313 | 8.002 |
| Chromium | 53 | 0.3742 | 0.3233 | 0.3497 | **0.3491** | 0.0255 | 7.297 |
| Cobalt | 59 | 0.0437 | 0.0384 | 0.042 | **0.0413** | 0.0027 | 6.504 |
| Copper | 63 | 0.3723 | 0.3768 | 0.3681 | **0.3724** | 0.0043 | 1.16 |
| Copper | 65 | 0.3813 | 0.3717 | 0.3469 | **0.3666** | 0.0178 | 4.846 |
| Lead | 206 | 0.1078 | 0.1076 | 0.1063 | **0.1072** | 0.0008 | 0.7674 |
| Lead | 207 | 0.1128 | 0.1056 | 0.1027 | **0.107** | 0.0052 | 4.839 |
| Lead | 208 | 0.1092 | 0.1074 | 0.1073 | **0.108** | 0.0011 | 1.012 |
| Molybdenum | 95 | 0.1058 | 0.11 | 0.0944 | **0.1034** | 0.0081 | 7.819 |
| Molybdenum | 97 | 0.0967 | 0.1114 | 0.0949 | **0.101** | 0.0091 | 8.963 |
| Molybdenum | 98 | 0.1072 | 0.1047 | 0.1043 | **0.1054** | 0.0016 | 1.5 |
| Nickel | 60 | 0.5126 | 0.5144 | 0.5062 | **0.5111** | 0.0043 | 0.8415 |
| Nickel | 62 | 0.5994 | 0.5058 | 0.4976 | **0.5343** | 0.0566 | 10.59 |
| Selenium | 77 | 1.867 | 1.667 | 1.951 | **1.828** | 0.1458 | 7.975 |
| Selenium | 78 | 1.79 | 1.716 | 1.891 | **1.799** | 0.0878 | 4.883 |
| Selenium | 82 | 1.722 | 2.099 | 1.603 | **1.808** | 0.2589 | 14.32 |
| Thallium | 203 | 0.0424 | 0.0414 | 0.0415 | **0.0418** | 0.0006 | 1.354 |
| Thallium | 205 | 0.0447 | 0.0408 | 0.0424 | **0.0426** | 0.002 | 4.651 |
| Zinc | 66 | 1.271 | 1.244 | 1.222 | **1.246** | 0.0245 | 1.963 |
| Zinc | 67 | 1.066 | 1.168 | 1.17 | **1.135** | 0.0593 | 5.225 |
| Zinc | 68 | 1.208 | 1.208 | 1.202 | **1.206** | 0.0035 | 0.2933 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.018 | 0.96 | 0.957 | **1.018** | n/a | n/a |
| Gallium | 71 | 1.029 | 1.042 | 1.046 | **1.029** | n/a | n/a |
| Rhodium | 103 | 1.03 | 1.029 | 1.032 | **1.03** | n/a | n/a |
| Indium | 115 | 1.034 | 1.022 | 1.026 | **1.034** | n/a | n/a |
| Lutetium | 175 | 1.033 | 1.019 | 1.008 | **1.033** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | ICSA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:55 | | | | | |
| Arsenic | 75 | 0.0111 | -0.1193 | -0.0176 | **-0.0419** | 0.0685 | 163.4 |
| Beryllium | 9 | 0.0022 | 0.0013 | 0.0033 | **0.0022** | 0.001 | 44.4 |
| Cadmium | 111 | 0.3896 | 0.3559 | 0.3882 | **0.3779** | 0.0191 | 5.047 |
| Cadmium | 114 | 0.337 | 0.3416 | 0.3319 | **0.3369** | 0.0048 | 1.438 |
| Chromium | 52 | 0.6132 | 0.6082 | 0.5395 | **0.587** | 0.0412 | 7.019 |
| Chromium | 53 | 3.861 | 3.899 | 3.692 | **3.817** | 0.1101 | 2.885 |
| Cobalt | 59 | 0.8491 | 0.8304 | 0.8097 | **0.8297** | 0.0197 | 2.379 |
| Copper | 63 | 1.307 | 1.302 | 1.304 | **1.304** | 0.0023 | 0.1787 |
| Copper | 65 | 0.8419 | 0.8473 | 0.8572 | **0.8488** | 0.0078 | 0.9153 |
| Lead | 206 | 0.0753 | 0.0756 | 0.0786 | **0.0765** | 0.0018 | 2.379 |
| Lead | 207 | 0.0909 | 0.0961 | 0.0877 | **0.0916** | 0.0042 | 4.615 |
| Lead | 208 | 0.0844 | 0.0837 | 0.0823 | **0.0834** | 0.0011 | 1.264 |
| Molybdenum | 95 | 53.57 | 53.91 | 53.4 | **53.63** | 0.2636 | 0.4916 |
| Molybdenum | 97 | 54.21 | 54.45 | 53.93 | **54.2** | 0.2582 | 0.4765 |
| Molybdenum | 98 | 55.2 | 55.01 | 54.27 | **54.83** | 0.4903 | 0.8943 |
| Nickel | 60 | 2.239 | 2.244 | 2.213 | **2.232** | 0.0163 | 0.7281 |
| Nickel | 62 | 3.121 | 3.172 | 3.069 | **3.12** | 0.0517 | 1.656 |
| Selenium | 77 | 2.738 | 2.893 | 2.648 | **2.76** | 0.1237 | 4.483 |
| Selenium | 78 | 0.2102 | 0.1813 | 0.0965 | **0.1627** | 0.0591 | 36.33 |
| Selenium | 82 | -0.0374 | -0.3268 | -0.2716 | **-0.2119** | 0.1537 | 72.51 |
| Thallium | 203 | 0.0514 | 0.0387 | 0.0364 | **0.0422** | 0.0081 | 19.15 |
| Thallium | 205 | 0.0542 | 0.0408 | 0.0341 | **0.043** | 0.0102 | 23.74 |
| Zinc | 66 | 1.586 | 1.486 | 1.492 | **1.522** | 0.0558 | 3.668 |
| Zinc | 67 | 3.214 | 3.174 | 3.246 | **3.211** | 0.0361 | 1.123 |
| Zinc | 68 | 1.177 | 1.126 | 1.193 | **1.165** | 0.0351 | 3.011 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.241 | 1.255 | 1.227 | **1.241** | n/a | n/a |
| Gallium | 71 | 1.343 | 1.422 | 1.471 | **1.343** | n/a | n/a |
| Rhodium | 103 | 1.321 | 1.384 | 1.397 | **1.321** | n/a | n/a |
| Indium | 115 | 1.256 | 1.312 | 1.337 | **1.256** | n/a | n/a |
| Lutetium | 175 | 1.186 | 1.197 | 1.206 | **1.186** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | ICSAB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 12:59 | | | | | |
| Arsenic | 75 | 26.36 | 26.22 | 26.17 | **26.25** | 0.0942 | 0.3588 |
| Beryllium | 9 | 0.0079 | 0.0029 | 0.0051 | **0.0053** | 0.0025 | 46.51 |
| Cadmium | 111 | 25.76 | 25.7 | 25.66 | **25.7** | 0.0484 | 0.1883 |
| Cadmium | 114 | 25.37 | 25.46 | 25.11 | **25.32** | 0.1818 | 0.7182 |
| Chromium | 52 | 48.71 | 47.92 | 47.33 | **47.99** | 0.6886 | 1.435 |
| Chromium | 53 | 51.93 | 51.57 | 51.38 | **51.62** | 0.2814 | 0.5451 |
| Cobalt | 59 | 49.88 | 49.02 | 49.15 | **49.35** | 0.463 | 0.9383 |
| Copper | 63 | 47.77 | 47.04 | 47.33 | **47.38** | 0.3716 | 0.7844 |
| Copper | 65 | 48.13 | 47.16 | 47.58 | **47.62** | 0.4873 | 1.023 |
| Lead | 206 | 0.0591 | 0.0628 | 0.0687 | **0.0635** | 0.0048 | 7.584 |
| Lead | 207 | 0.0788 | 0.0777 | 0.0749 | **0.0771** | 0.002 | 2.639 |
| Lead | 208 | 0.0698 | 0.0742 | 0.0736 | **0.0725** | 0.0024 | 3.314 |
| Molybdenum | 95 | 52.32 | 52.3 | 52.38 | **52.33** | 0.0423 | 0.0809 |
| Molybdenum | 97 | 52.72 | 52.88 | 52.58 | **52.73** | 0.1535 | 0.2911 |
| Molybdenum | 98 | 52.47 | 53.42 | 53.31 | **53.07** | 0.5189 | 0.9778 |
| Nickel | 60 | 48.81 | 48.55 | 48.4 | **48.59** | 0.2054 | 0.4227 |
| Nickel | 62 | 50.65 | 48.71 | 49.52 | **49.63** | 0.9726 | 1.96 |
| Selenium | 77 | 28.65 | 28.92 | 28.26 | **28.61** | 0.3301 | 1.154 |
| Selenium | 78 | 26.34 | 25.48 | 25.65 | **25.82** | 0.4581 | 1.774 |
| Selenium | 82 | 25.7 | 25.89 | 25.72 | **25.77** | 0.1047 | 0.4062 |
| Thallium | 203 | 0.0296 | 0.0289 | 0.0243 | **0.0276** | 0.0028 | 10.32 |
| Thallium | 205 | 0.0294 | 0.0266 | 0.0253 | **0.0271** | 0.0021 | 7.734 |
| Zinc | 66 | 25.49 | 25.11 | 25.08 | **25.23** | 0.2276 | 0.902 |
| Zinc | 67 | 26.61 | 25.74 | 26.42 | **26.25** | 0.4586 | 1.747 |
| Zinc | 68 | 24.04 | 23.38 | 23.76 | **23.73** | 0.3326 | 1.402 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.213 | 1.194 | 1.199 | **1.213** | n/a | n/a |
| Gallium | 71 | 1.338 | 1.383 | 1.419 | **1.338** | n/a | n/a |
| Rhodium | 103 | 1.321 | 1.363 | 1.368 | **1.321** | n/a | n/a |
| Indium | 115 | 1.255 | 1.272 | 1.276 | **1.255** | n/a | n/a |
| Lutetium | 175 | 1.164 | 1.175 | 1.18 | **1.164** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-MB 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:03 | | | | | |
| Arsenic | 75 | 0.0128 | -0.0265 | 0.0177 | **0.0013** | 0.0242 | 1835 |
| Beryllium | 9 | -0.0036 | 0 | 0.0027 | **-0.0003** | 0.0032 | 1122 |
| Cadmium | 111 | 0.0037 | 0.004 | 0.0006 | **0.0028** | 0.0019 | 69.39 |
| Cadmium | 114 | 0.2167 | 0.2225 | 0.2111 | **0.2168** | 0.0057 | 2.627 |
| Chromium | 52 | 0.0539 | 0.0505 | 0.0607 | **0.055** | 0.0052 | 9.477 |
| Chromium | 53 | 0.1714 | 0.154 | 0.098 | **0.1412** | 0.0384 | 27.19 |
| Cobalt | 59 | 0.0066 | 0.0061 | 0.0042 | **0.0056** | 0.0013 | 23.01 |
| Copper | 63 | -0.0161 | -0.0218 | -0.018 | **-0.0186** | 0.0029 | 15.53 |
| Copper | 65 | -0.0149 | -0.0268 | -0.0243 | **-0.022** | 0.0063 | 28.42 |
| Lead | 206 | 0.0733 | 0.0678 | 0.077 | **0.0727** | 0.0046 | 6.333 |
| Lead | 207 | 0.071 | 0.0803 | 0.0738 | **0.075** | 0.0048 | 6.385 |
| Lead | 208 | 0.0742 | 0.0769 | 0.0738 | **0.0749** | 0.0017 | 2.271 |
| Molybdenum | 95 | 0.2713 | 0.1459 | 0.0828 | **0.1667** | 0.0959 | 57.55 |
| Molybdenum | 97 | 0.2859 | 0.1493 | 0.0769 | **0.1707** | 0.1062 | 62.19 |
| Molybdenum | 98 | 0.2669 | 0.1312 | 0.0874 | **0.1618** | 0.0936 | 57.83 |
| Nickel | 60 | 0.0404 | 0.0458 | 0.0508 | **0.0457** | 0.0052 | 11.4 |
| Nickel | 62 | 0.1035 | 0.1522 | 0.0662 | **0.1073** | 0.0431 | 40.21 |
| Selenium | 77 | -0.0356 | -0.0186 | 0.019 | **-0.0118** | 0.028 | 237.8 |
| Selenium | 78 | -0.1859 | -0.1292 | -0.231 | **-0.182** | 0.051 | 28.01 |
| Selenium | 82 | -0.1087 | -0.2023 | 0.0266 | **-0.0948** | 0.1151 | 121.4 |
| Thallium | 203 | -0.0012 | -0.0014 | -0.0006 | **-0.001** | 0.0004 | 38.74 |
| Thallium | 205 | -0.0003 | -0.0009 | -0.0003 | **-0.0005** | 0.0003 | 64.65 |
| Zinc | 66 | 0.0609 | 0.0496 | 0.0505 | **0.0537** | 0.0063 | 11.68 |
| Zinc | 67 | 0.0375 | 0.0251 | 0.0446 | **0.0357** | 0.0099 | 27.58 |
| Zinc | 68 | 0.0779 | 0.0574 | 0.0723 | **0.0692** | 0.0106 | 15.33 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.132 | 1.085 | 1.065 | **1.132** | n/a | n/a |
| Gallium | 71 | 1.182 | 1.176 | 1.164 | **1.182** | n/a | n/a |
| Rhodium | 103 | 1.167 | 1.143 | 1.137 | **1.167** | n/a | n/a |
| Indium | 115 | 1.13 | 1.123 | 1.103 | **1.13** | n/a | n/a |
| Lutetium | 175 | 1.104 | 1.075 | 1.066 | **1.104** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | LCSS K1008775 1/100 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:06 | | | | | |
| Arsenic | 75 | 8.667 | 8.414 | 8.542 | **8.541** | 0.1267 | 1.484 |
| Beryllium | 9 | 5.573 | 5.414 | 5.376 | **5.454** | 0.1044 | 1.914 |
| Cadmium | 111 | 9.244 | 9.214 | 9.349 | **9.269** | 0.0707 | 0.763 |
| Cadmium | 114 | 9.494 | 9.223 | 9.381 | **9.366** | 0.1361 | 1.453 |
| Chromium | 52 | 13.13 | 12.52 | 12.59 | **12.75** | 0.3342 | 2.622 |
| Chromium | 53 | 13.34 | 12.61 | 12.64 | **12.86** | 0.411 | 3.195 |
| Cobalt | 59 | 18.69 | 17.86 | 17.86 | **18.14** | 0.4819 | 2.657 |
| Copper | 63 | 21.89 | 21.09 | 21.19 | **21.39** | 0.4371 | 2.044 |
| Copper | 65 | 22.16 | 21.28 | 21.69 | **21.71** | 0.4425 | 2.038 |
| Lead | 206 | 8.914 | 8.791 | 8.828 | **8.844** | 0.0632 | 0.7151 |
| Lead | 207 | 10.09 | 9.88 | 10.02 | **9.999** | 0.1079 | 1.08 |
| Lead | 208 | 9.606 | 9.456 | 9.702 | **9.588** | 0.1239 | 1.292 |
| Molybdenum | 95 | 5.421 | 5.335 | 5.497 | **5.418** | 0.0814 | 1.501 |
| Molybdenum | 97 | 5.595 | 5.53 | 5.472 | **5.532** | 0.0619 | 1.119 |
| Molybdenum | 98 | 5.571 | 5.496 | 5.504 | **5.524** | 0.0408 | 0.7389 |
| Nickel | 60 | 19.6 | 18.83 | 18.98 | **19.14** | 0.4082 | 2.133 |
| Nickel | 62 | 19.89 | 19.14 | 18.92 | **19.32** | 0.5111 | 2.646 |
| Selenium | 77 | 20.98 | 20.31 | 20.28 | **20.52** | 0.3975 | 1.937 |
| Selenium | 78 | 20.52 | 19.42 | 19.59 | **19.85** | 0.593 | 2.988 |
| Selenium | 82 | 20.27 | 20 | 19.83 | **20.03** | 0.2241 | 1.119 |
| Thallium | 203 | 23.58 | 23.4 | 23.73 | **23.57** | 0.1616 | 0.6857 |
| Thallium | 205 | 23.76 | 23.17 | 23.36 | **23.43** | 0.2972 | 1.269 |
| Zinc | 66 | 30.51 | 29.66 | 29.57 | **29.92** | 0.5199 | 1.738 |
| Zinc | 67 | 30.77 | 29.16 | 29.43 | **29.78** | 0.8641 | 2.901 |
| Zinc | 68 | 31.3 | 29.98 | 30.21 | **30.5** | 0.7028 | 2.304 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.035 | 0.996 | 1 | **1.035** | n/a | n/a |
| Gallium | 71 | 1.133 | 1.112 | 1.128 | **1.133** | n/a | n/a |
| Rhodium | 103 | 1.109 | 1.088 | 1.1 | **1.109** | n/a | n/a |
| Indium | 115 | 1.086 | 1.071 | 1.092 | **1.086** | n/a | n/a |
| Lutetium | 175 | 1.054 | 1.039 | 1.053 | **1.054** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:10 | | | | | |
| Arsenic | 75 | 2.169 | 2.391 | 2.3 | **2.287** | 0.1119 | 4.894 |
| Beryllium | 9 | 0.0866 | 0.0824 | 0.0784 | **0.0825** | 0.0041 | 4.934 |
| Cadmium | 111 | 0.0503 | 0.0619 | 0.0526 | **0.0549** | 0.0061 | 11.12 |
| Cadmium | 114 | 0.2031 | 0.2113 | 0.2074 | **0.2073** | 0.0041 | 1.955 |
| Chromium | 52 | 6.993 | 6.876 | 6.772 | **6.88** | 0.1104 | 1.605 |
| Chromium | 53 | 7.056 | 7.065 | 6.815 | **6.979** | 0.1416 | 2.029 |
| Cobalt | 59 | 1.631 | 1.642 | 1.635 | **1.636** | 0.0058 | 0.3547 |
| Copper | 63 | 5.465 | 5.448 | 5.478 | **5.464** | 0.0152 | 0.2781 |
| Copper | 65 | 5.507 | 5.612 | 5.516 | **5.545** | 0.0582 | 1.05 |
| Lead | 206 | 3.46 | 3.52 | 3.511 | **3.497** | 0.0321 | 0.9183 |
| Lead | 207 | 3.771 | 3.91 | 3.827 | **3.836** | 0.0701 | 1.826 |
| Lead | 208 | 3.702 | 3.761 | 3.72 | **3.728** | 0.0304 | 0.8159 |
| Molybdenum | 95 | 0.389 | 0.3198 | 0.2935 | **0.3341** | 0.0493 | 14.77 |
| Molybdenum | 97 | 0.3977 | 0.3212 | 0.3123 | **0.3437** | 0.047 | 13.66 |
| Molybdenum | 98 | 0.3958 | 0.3294 | 0.3026 | **0.3426** | 0.048 | 14 |
| Nickel | 60 | 2.917 | 2.919 | 2.882 | **2.906** | 0.0207 | 0.7137 |
| Nickel | 62 | 3.844 | 3.734 | 3.625 | **3.735** | 0.1095 | 2.933 |
| Selenium | 77 | 0.2744 | 0.3204 | 0.4791 | **0.358** | 0.1074 | 30.01 |
| Selenium | 78 | -0.0679 | 0.0064 | -0.276 | **-0.1125** | 0.1464 | 130.1 |
| Selenium | 82 | 0.0648 | 0.4379 | 0.3425 | **0.2817** | 0.1938 | 68.79 |
| Thallium | 203 | 0.1207 | 0.1174 | 0.1044 | **0.1142** | 0.0086 | 7.535 |
| Thallium | 205 | 0.1259 | 0.1111 | 0.1111 | **0.116** | 0.0086 | 7.372 |
| Zinc | 66 | 23.11 | 23.36 | 23.07 | **23.18** | 0.1553 | 0.6701 |
| Zinc | 67 | 22.81 | 22.99 | 23.3 | **23.03** | 0.2489 | 1.081 |
| Zinc | 68 | 23.37 | 22.86 | 23.16 | **23.13** | 0.2561 | 1.107 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.055 | 1.047 | 1.031 | **1.055** | n/a | n/a |
| Gallium | 71 | 1.054 | 1.079 | 1.099 | **1.054** | n/a | n/a |
| Rhodium | 103 | 1.098 | 1.115 | 1.129 | **1.098** | n/a | n/a |
| Indium | 115 | 1.081 | 1.084 | 1.111 | **1.081** | n/a | n/a |
| Lutetium | 175 | 1.041 | 1.053 | 1.05 | **1.041** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-001 1/5D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:13 | | | | | |
| Arsenic | 75 | 2.144 | 2.094 | 2.083 | **2.107** | 0.0327 | 1.553 |
| Beryllium | 9 | 0.0779 | 0.0822 | 0.0722 | **0.0774** | 0.005 | 6.454 |
| Cadmium | 111 | 0.0446 | 0.0511 | 0.0411 | **0.0456** | 0.0051 | 11.14 |
| Cadmium | 114 | 0.191 | 0.1941 | 0.1899 | **0.1917** | 0.0022 | 1.129 |
| Chromium | 52 | 6.207 | 6.061 | 6.031 | **6.099** | 0.0943 | 1.545 |
| Chromium | 53 | 6.154 | 6.056 | 5.994 | **6.068** | 0.0807 | 1.33 |
| Cobalt | 59 | 1.528 | 1.523 | 1.508 | **1.52** | 0.0102 | 0.6705 |
| Copper | 63 | 4.789 | 4.69 | 4.764 | **4.748** | 0.0514 | 1.082 |
| Copper | 65 | 4.878 | 4.728 | 4.805 | **4.804** | 0.0755 | 1.571 |
| Lead | 206 | 3.156 | 3.129 | 3.208 | **3.164** | 0.0405 | 1.279 |
| Lead | 207 | 3.558 | 3.488 | 3.614 | **3.553** | 0.063 | 1.773 |
| Lead | 208 | 3.416 | 3.352 | 3.431 | **3.399** | 0.0418 | 1.229 |
| Molybdenum | 95 | 0.2713 | 0.2601 | 0.246 | **0.2591** | 0.0127 | 4.891 |
| Molybdenum | 97 | 0.273 | 0.2743 | 0.2657 | **0.271** | 0.0046 | 1.701 |
| Molybdenum | 98 | 0.2618 | 0.258 | 0.2585 | **0.2595** | 0.002 | 0.7901 |
| Nickel | 60 | 2.669 | 2.636 | 2.562 | **2.622** | 0.0549 | 2.093 |
| Nickel | 62 | 3.535 | 3.483 | 3.455 | **3.491** | 0.0408 | 1.169 |
| Selenium | 77 | 0.3479 | 0.3517 | 0.525 | **0.4082** | 0.1012 | 24.79 |
| Selenium | 78 | -0.1195 | -0.1195 | -0.0145 | **-0.0845** | 0.0606 | 71.71 |
| Selenium | 82 | 0.5801 | 0.3991 | 0.5064 | **0.4952** | 0.091 | 18.38 |
| Thallium | 203 | 0.1098 | 0.1101 | 0.1114 | **0.1104** | 0.0009 | 0.7763 |
| Thallium | 205 | 0.109 | 0.1064 | 0.1065 | **0.1073** | 0.0014 | 1.343 |
| Zinc | 66 | 21.96 | 21.9 | 21.76 | **21.87** | 0.1071 | 0.4896 |
| Zinc | 67 | 22.1 | 21.38 | 21.65 | **21.71** | 0.3633 | 1.673 |
| Zinc | 68 | 22.09 | 21.62 | 22.05 | **21.92** | 0.2616 | 1.194 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.06 | 1.023 | 1.027 | **1.06** | n/a | n/a |
| Gallium | 71 | 1.094 | 1.086 | 1.104 | **1.094** | n/a | n/a |
| Rhodium | 103 | 1.138 | 1.114 | 1.135 | **1.138** | n/a | n/a |
| Indium | 115 | 1.094 | 1.098 | 1.103 | **1.094** | n/a | n/a |
| Lutetium | 175 | 1.052 | 1.031 | 1.054 | **1.052** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-001 1/25L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:17 | | | | | |
| Arsenic | 75 | 0.5989 | 0.6098 | 0.5708 | **0.5932** | 0.0201 | 3.389 |
| Beryllium | 9 | 0.0151 | 0.0183 | 0.0159 | **0.0164** | 0.0017 | 10.41 |
| Cadmium | 111 | 0.0141 | 0.013 | 0.0082 | **0.0118** | 0.0031 | 26.6 |
| Cadmium | 114 | 0.0505 | 0.0455 | 0.0485 | **0.0482** | 0.0025 | 5.281 |
| Chromium | 52 | 1.542 | 1.545 | 1.491 | **1.526** | 0.0303 | 1.986 |
| Chromium | 53 | 1.537 | 1.517 | 1.416 | **1.49** | 0.0649 | 4.358 |
| Cobalt | 59 | 0.3796 | 0.3774 | 0.3575 | **0.3715** | 0.0122 | 3.278 |
| Copper | 63 | 1.245 | 1.282 | 1.249 | **1.259** | 0.0206 | 1.633 |
| Copper | 65 | 1.278 | 1.259 | 1.222 | **1.253** | 0.0285 | 2.276 |
| Lead | 206 | 0.8182 | 0.7776 | 0.7883 | **0.7947** | 0.0211 | 2.649 |
| Lead | 207 | 0.8639 | 0.8934 | 0.9039 | **0.8871** | 0.0207 | 2.338 |
| Lead | 208 | 0.8487 | 0.8411 | 0.8453 | **0.845** | 0.0038 | 0.4469 |
| Molybdenum | 95 | 0.0482 | 0.0565 | 0.0562 | **0.0536** | 0.0047 | 8.764 |
| Molybdenum | 97 | 0.0571 | 0.0515 | 0.0441 | **0.0509** | 0.0065 | 12.83 |
| Molybdenum | 98 | 0.0572 | 0.0476 | 0.0509 | **0.0519** | 0.0049 | 9.443 |
| Nickel | 60 | 0.6657 | 0.6498 | 0.6628 | **0.6594** | 0.0085 | 1.282 |
| Nickel | 62 | 0.9234 | 0.8631 | 0.8881 | **0.8916** | 0.0303 | 3.4 |
| Selenium | 77 | -0.0264 | -0.0616 | 0.0579 | **-0.01** | 0.0614 | 611.6 |
| Selenium | 78 | 0.2255 | 0.1354 | 0.2572 | **0.206** | 0.0632 | 30.67 |
| Selenium | 82 | 0.1824 | 0.1915 | 0.1138 | **0.1626** | 0.0425 | 26.13 |
| Thallium | 203 | 0.0176 | 0.0164 | 0.018 | **0.0173** | 0.0009 | 4.961 |
| Thallium | 205 | 0.0184 | 0.0178 | 0.0169 | **0.0177** | 0.0007 | 4.116 |
| Zinc | 66 | 5.782 | 5.61 | 5.575 | **5.656** | 0.111 | 1.963 |
| Zinc | 67 | 5.565 | 5.64 | 5.486 | **5.564** | 0.077 | 1.384 |
| Zinc | 68 | 5.729 | 5.773 | 5.536 | **5.679** | 0.1261 | 2.221 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.033 | 1.019 | 0.97 | **1.033** | n/a | n/a |
| Gallium | 71 | 1.074 | 1.071 | 1.074 | **1.074** | n/a | n/a |
| Rhodium | 103 | 1.071 | 1.059 | 1.057 | **1.071** | n/a | n/a |
| Indium | 115 | 1.063 | 1.042 | 1.039 | **1.063** | n/a | n/a |
| Lutetium | 175 | 1.024 | 1.02 | 1.023 | **1.024** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-001 1/5 +50A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:20 | | | | | |
| Arsenic | 75 | 48.55 | 49.36 | 49.09 | **49** | 0.4076 | 0.8318 |
| Beryllium | 9 | 47.9 | 46.87 | 47.08 | **47.29** | 0.5429 | 1.148 |
| Cadmium | 111 | 47.98 | 47.08 | 46.62 | **47.23** | 0.6903 | 1.462 |
| Cadmium | 114 | 49.46 | 48.27 | 48.73 | **48.82** | 0.5982 | 1.225 |
| Chromium | 52 | 53.63 | 52.5 | 53.07 | **53.07** | 0.5628 | 1.061 |
| Chromium | 53 | 53.56 | 53.17 | 53.21 | **53.31** | 0.2115 | 0.3967 |
| Cobalt | 59 | 48.23 | 47.93 | 47.55 | **47.9** | 0.343 | 0.716 |
| Copper | 63 | 51.17 | 51.17 | 51.09 | **51.14** | 0.049 | 0.0958 |
| Copper | 65 | 51.15 | 51.6 | 51.27 | **51.34** | 0.2309 | 0.4498 |
| Lead | 206 | 51.57 | 51.38 | 51.34 | **51.43** | 0.1217 | 0.2366 |
| Lead | 207 | 51.16 | 51.76 | 51.71 | **51.55** | 0.3324 | 0.6449 |
| Lead | 208 | 51.07 | 51.74 | 51.44 | **51.42** | 0.3351 | 0.6516 |
| Molybdenum | 95 | 50.43 | 50.45 | 50.42 | **50.43** | 0.0146 | 0.0289 |
| Molybdenum | 97 | 51.11 | 51.13 | 50.37 | **50.87** | 0.4317 | 0.8487 |
| Molybdenum | 98 | 51.25 | 51.18 | 51.26 | **51.23** | 0.0435 | 0.0849 |
| Nickel | 60 | 48.99 | 48.55 | 48.74 | **48.76** | 0.2204 | 0.4521 |
| Nickel | 62 | 49.82 | 49.54 | 50.33 | **49.89** | 0.4 | 0.8016 |
| Selenium | 77 | 46.84 | 47.26 | 46.34 | **46.81** | 0.464 | 0.9912 |
| Selenium | 78 | 45.73 | 45.57 | 46.67 | **45.99** | 0.5963 | 1.297 |
| Selenium | 82 | 47.3 | 47.55 | 47.49 | **47.45** | 0.1329 | 0.2802 |
| Thallium | 203 | 48.71 | 48.6 | 49.77 | **49.03** | 0.6449 | 1.315 |
| Thallium | 205 | 48.79 | 49.27 | 49.27 | **49.11** | 0.2754 | 0.5608 |
| Zinc | 66 | 69.11 | 69.38 | 69.41 | **69.3** | 0.169 | 0.2438 |
| Zinc | 67 | 69.03 | 67.43 | 69.15 | **68.53** | 0.961 | 1.402 |
| Zinc | 68 | 69.68 | 69.17 | 69.83 | **69.56** | 0.3501 | 0.5034 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.997 | 0.982 | 0.999 | **0.997** | n/a | n/a |
| Gallium | 71 | 1.054 | 1.083 | 1.099 | **1.054** | n/a | n/a |
| Rhodium | 103 | 1.1 | 1.102 | 1.103 | **1.1** | n/a | n/a |
| Indium | 115 | 1.056 | 1.039 | 1.052 | **1.056** | n/a | n/a |
| Lutetium | 175 | 1.013 | 1.016 | 1.019 | **1.013** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-001 1/25S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:24 | | | | | |
| Arsenic | 75 | 39.12 | 38.18 | 37.92 | **38.41** | 0.6345 | 1.652 |
| Beryllium | 9 | 3.943 | 4.027 | 3.881 | **3.95** | 0.0736 | 1.862 |
| Cadmium | 111 | 4.183 | 4.04 | 4.156 | **4.126** | 0.076 | 1.842 |
| Cadmium | 114 | 4.1 | 4.124 | 4.153 | **4.126** | 0.0266 | 0.6445 |
| Chromium | 52 | 16.42 | 16.03 | 15.93 | **16.13** | 0.2569 | 1.593 |
| Chromium | 53 | 16.38 | 15.93 | 15.79 | **16.03** | 0.3092 | 1.928 |
| Cobalt | 59 | 38.28 | 37.48 | 37.23 | **37.66** | 0.55 | 1.46 |
| Copper | 63 | 20.14 | 19.66 | 19.45 | **19.75** | 0.3542 | 1.793 |
| Copper | 65 | 20.43 | 19.69 | 19.91 | **20.01** | 0.3791 | 1.895 |
| Lead | 206 | 35.89 | 35.69 | 35.09 | **35.56** | 0.416 | 1.17 |
| Lead | 207 | 44.08 | 42.85 | 42.18 | **43.04** | 0.9636 | 2.239 |
| Lead | 208 | 40.31 | 40.02 | 39.36 | **39.9** | 0.4835 | 1.212 |
| Molybdenum | 95 | 36.86 | 36.27 | 36.61 | **36.58** | 0.297 | 0.8121 |
| Molybdenum | 97 | 37.15 | 36.71 | 35.87 | **36.58** | 0.6509 | 1.78 |
| Molybdenum | 98 | 37.26 | 36.4 | 36.71 | **36.79** | 0.437 | 1.188 |
| Nickel | 60 | 38.91 | 37.54 | 37.22 | **37.89** | 0.8985 | 2.371 |
| Nickel | 62 | 39.36 | 38.37 | 38.77 | **38.84** | 0.4996 | 1.287 |
| Selenium | 77 | 40.47 | 39.99 | 38.85 | **39.77** | 0.83 | 2.087 |
| Selenium | 78 | 40.24 | 38.84 | 38 | **39.03** | 1.13 | 2.897 |
| Selenium | 82 | 39.84 | 39.3 | 39.74 | **39.63** | 0.289 | 0.7294 |
| Thallium | 203 | 37.34 | 36.98 | 36.89 | **37.07** | 0.2382 | 0.6425 |
| Thallium | 205 | 37.6 | 37.96 | 37.32 | **37.63** | 0.3245 | 0.8625 |
| Zinc | 66 | 47.3 | 46.03 | 45.8 | **46.38** | 0.8056 | 1.737 |
| Zinc | 67 | 52.12 | 51.97 | 51.16 | **51.75** | 0.5165 | 0.9981 |
| Zinc | 68 | 51.68 | 49.57 | 50.13 | **50.46** | 1.093 | 2.167 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.978 | 0.983 | 0.949 | **0.978** | n/a | n/a |
| Gallium | 71 | 1.106 | 1.089 | 1.091 | **1.106** | n/a | n/a |
| Rhodium | 103 | 1.099 | 1.082 | 1.073 | **1.099** | n/a | n/a |
| Indium | 115 | 1.062 | 1.051 | 1.069 | **1.062** | n/a | n/a |
| Lutetium | 175 | 1.034 | 1.024 | 1.012 | **1.034** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-002 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:27 | | | | | |
| Arsenic | 75 | 3.94 | 3.78 | 3.965 | **3.895** | 0.1007 | 2.585 |
| Beryllium | 9 | 0.3192 | 0.3227 | 0.3552 | **0.3324** | 0.0198 | 5.968 |
| Cadmium | 111 | 0.314 | 0.2829 | 0.2739 | **0.2903** | 0.0211 | 7.254 |
| Cadmium | 114 | 0.416 | 0.4301 | 0.4232 | **0.4231** | 0.0071 | 1.667 |
| Chromium | 52 | 26.77 | 26.3 | 26.73 | **26.6** | 0.2584 | 0.9716 |
| Chromium | 53 | 26.69 | 26.82 | 26.91 | **26.81** | 0.1079 | 0.4023 |
| Cobalt | 59 | 4.741 | 4.686 | 4.706 | **4.711** | 0.0276 | 0.5852 |
| Copper | 63 | 13.12 | 12.93 | 13.15 | **13.07** | 0.1168 | 0.8938 |
| Copper | 65 | 13.38 | 13.24 | 13.21 | **13.27** | 0.0898 | 0.6769 |
| Lead | 206 | 8.652 | 8.515 | 8.66 | **8.609** | 0.0816 | 0.9478 |
| Lead | 207 | 9.614 | 9.526 | 9.614 | **9.585** | 0.0511 | 0.5334 |
| Lead | 208 | 9.228 | 9.239 | 9.248 | **9.239** | 0.0097 | 0.1051 |
| Molybdenum | 95 | 0.9326 | 0.721 | 0.6833 | **0.779** | 0.1344 | 17.25 |
| Molybdenum | 97 | 1.002 | 0.7425 | 0.6592 | **0.8012** | 0.1787 | 22.31 |
| Molybdenum | 98 | 0.9607 | 0.7403 | 0.6688 | **0.7899** | 0.1522 | 19.27 |
| Nickel | 60 | 14.22 | 14.27 | 14.31 | **14.27** | 0.0436 | 0.3053 |
| Nickel | 62 | 16.83 | 16.99 | 16.86 | **16.89** | 0.0831 | 0.4921 |
| Selenium | 77 | 1.428 | 1.361 | 1.039 | **1.276** | 0.2082 | 16.32 |
| Selenium | 78 | -0.177 | -0.1336 | -0.0057 | **-0.1055** | 0.089 | 84.42 |
| Selenium | 82 | 1.566 | 1.285 | 1.162 | **1.338** | 0.2069 | 15.47 |
| Thallium | 203 | 0.4171 | 0.3965 | 0.3734 | **0.3956** | 0.0219 | 5.523 |
| Thallium | 205 | 0.4205 | 0.3914 | 0.3801 | **0.3973** | 0.0209 | 5.249 |
| Zinc | 66 | 47.32 | 46.53 | 46.63 | **46.83** | 0.4311 | 0.9206 |
| Zinc | 67 | 47.13 | 47.28 | 48.48 | **47.63** | 0.739 | 1.552 |
| Zinc | 68 | 47.16 | 47.21 | 47.87 | **47.41** | 0.3971 | 0.8376 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.091 | 1.09 | 1.104 | **1.091** | n/a | n/a |
| Gallium | 71 | 1.065 | 1.11 | 1.14 | **1.065** | n/a | n/a |
| Rhodium | 103 | 1.215 | 1.226 | 1.245 | **1.215** | n/a | n/a |
| Indium | 115 | 1.158 | 1.181 | 1.184 | **1.158** | n/a | n/a |
| Lutetium | 175 | 1.084 | 1.095 | 1.1 | **1.084** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCV2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:31 | | | | | |
| Arsenic | 75 | 24.63 | 24.46 | 24.75 | **24.61** | 0.1471 | 0.5975 |
| Beryllium | 9 | 25.79 | 25.5 | 25.42 | **25.57** | 0.1984 | 0.7761 |
| Cadmium | 111 | 25.46 | 25.02 | 25.08 | **25.19** | 0.2401 | 0.9535 |
| Cadmium | 114 | 25.46 | 25.14 | 25.01 | **25.2** | 0.2335 | 0.9265 |
| Chromium | 52 | 24.49 | 24.21 | 24.03 | **24.25** | 0.2308 | 0.952 |
| Chromium | 53 | 24.57 | 24.18 | 24.24 | **24.33** | 0.2127 | 0.8741 |
| Cobalt | 59 | 24.76 | 24.34 | 24.24 | **24.45** | 0.28 | 1.145 |
| Copper | 63 | 24.64 | 24.36 | 24.41 | **24.47** | 0.1517 | 0.6201 |
| Copper | 65 | 24.63 | 24.7 | 24.5 | **24.61** | 0.1012 | 0.4112 |
| Lead | 206 | 25.29 | 24.87 | 25.01 | **25.06** | 0.2161 | 0.8625 |
| Lead | 207 | 25.44 | 25.29 | 25.01 | **25.25** | 0.218 | 0.8632 |
| Lead | 208 | 25.32 | 25.05 | 25.13 | **25.17** | 0.14 | 0.5562 |
| Molybdenum | 95 | 24.7 | 24.7 | 24.93 | **24.78** | 0.1338 | 0.54 |
| Molybdenum | 97 | 24.84 | 24.9 | 25 | **24.91** | 0.0792 | 0.3178 |
| Molybdenum | 98 | 25.29 | 25.14 | 25.58 | **25.34** | 0.2208 | 0.8716 |
| Nickel | 60 | 24.52 | 24.58 | 24.41 | **24.5** | 0.0895 | 0.3654 |
| Nickel | 62 | 24.81 | 24.26 | 24.49 | **24.52** | 0.2751 | 1.122 |
| Selenium | 77 | 26.62 | 26.01 | 25.35 | **26** | 0.6352 | 2.443 |
| Selenium | 78 | 25.02 | 24.81 | 24.69 | **24.84** | 0.1677 | 0.675 |
| Selenium | 82 | 25 | 24.23 | 25.54 | **24.92** | 0.6618 | 2.655 |
| Thallium | 203 | 24.93 | 25.32 | 25.29 | **25.18** | 0.2162 | 0.8589 |
| Thallium | 205 | 24.62 | 25.13 | 25.34 | **25.03** | 0.3722 | 1.487 |
| Zinc | 66 | 25.06 | 24.96 | 24.86 | **24.96** | 0.1003 | 0.402 |
| Zinc | 67 | 24.48 | 24.19 | 25.14 | **24.6** | 0.4887 | 1.987 |
| Zinc | 68 | 24.81 | 24.88 | 25.05 | **24.91** | 0.1249 | 0.5012 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.093 | 1.057 | 1.043 | **1.093** | n/a | n/a |
| Gallium | 71 | 1.122 | 1.119 | 1.127 | **1.122** | n/a | n/a |
| Rhodium | 103 | 1.108 | 1.093 | 1.095 | **1.108** | n/a | n/a |
| Indium | 115 | 1.085 | 1.073 | 1.069 | **1.085** | n/a | n/a |
| Lutetium | 175 | 1.048 | 1.038 | 1.035 | **1.048** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCB2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:37 | | | | | |
| Arsenic | 75 | 0.0195 | -0.003 | 0.0309 | **0.0158** | 0.0172 | 108.9 |
| Beryllium | 9 | 0.0093 | 0.0022 | 0.0032 | **0.0049** | 0.0038 | 77.64 |
| Cadmium | 111 | 0.0008 | 0.0007 | -0.0001 | **0.0005** | 0.0005 | 98.31 |
| Cadmium | 114 | 0.0022 | 0.0027 | 0.0017 | **0.0022** | 0.0005 | 23.66 |
| Chromium | 52 | -0.0263 | -0.043 | -0.0654 | **-0.0449** | 0.0197 | 43.77 |
| Chromium | 53 | -0.0563 | -0.0457 | -0.0389 | **-0.0469** | 0.0087 | 18.62 |
| Cobalt | 59 | 0.0035 | 0.0027 | 0.001 | **0.0024** | 0.0013 | 52.03 |
| Copper | 63 | 0.0005 | -0.0041 | -0.0063 | **-0.0033** | 0.0035 | 104.5 |
| Copper | 65 | -0.0072 | 0.0012 | -0.0033 | **-0.0031** | 0.0042 | 135.8 |
| Lead | 206 | 0.0011 | 0.0015 | 0.0009 | **0.0011** | 0.0003 | 26.07 |
| Lead | 207 | -0.0004 | 0.0038 | -0.0004 | **0.001** | 0.0024 | 244.9 |
| Lead | 208 | 0.0015 | 0.0025 | 0.0009 | **0.0016** | 0.0008 | 51.81 |
| Molybdenum | 95 | 0.0338 | 0.0144 | 0.0154 | **0.0212** | 0.0109 | 51.4 |
| Molybdenum | 97 | 0.0273 | 0.0096 | 0.0169 | **0.0179** | 0.0089 | 49.73 |
| Molybdenum | 98 | 0.0264 | 0.0184 | 0.0147 | **0.0198** | 0.0059 | 29.95 |
| Nickel | 60 | 0.0001 | 0.0041 | 0.0112 | **0.0051** | 0.0056 | 109 |
| Nickel | 62 | -0.0112 | -0.0418 | 0.0381 | **-0.005** | 0.0403 | 812.6 |
| Selenium | 77 | -0.1193 | -0.0763 | 0.0544 | **-0.0471** | 0.0905 | 192.2 |
| Selenium | 78 | -0.0754 | -0.0351 | -0.468 | **-0.1928** | 0.2392 | 124 |
| Selenium | 82 | -0.0556 | -0.1099 | 0.158 | **-0.0025** | 0.1416 | 5648 |
| Thallium | 203 | 0.0061 | 0.0023 | 0.0032 | **0.0039** | 0.002 | 51.98 |
| Thallium | 205 | 0.0046 | 0.0054 | 0.0035 | **0.0045** | 0.001 | 21.44 |
| Zinc | 66 | -0.0055 | -0.0018 | -0.0097 | **-0.0057** | 0.004 | 69.78 |
| Zinc | 67 | -0.0311 | 0.0141 | 0.0115 | **-0.0018** | 0.0254 | 1394 |
| Zinc | 68 | -0.0058 | 0.0006 | -0.0031 | **-0.0028** | 0.0032 | 115.1 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.071 | 1.017 | 1.027 | **1.071** | n/a | n/a |
| Gallium | 71 | 1.055 | 1.064 | 1.079 | **1.055** | n/a | n/a |
| Rhodium | 103 | 1.068 | 1.071 | 1.065 | **1.068** | n/a | n/a |
| Indium | 115 | 1.064 | 1.052 | 1.05 | **1.064** | n/a | n/a |
| Lutetium | 175 | 1.038 | 1.034 | 1.053 | **1.038** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008775-003 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:41 | | | | | |
| Arsenic | 75 | 1.987 | 2.039 | 2.058 | **2.028** | 0.0369 | 1.82 |
| Beryllium | 9 | 0.0799 | 0.0801 | 0.071 | **0.077** | 0.0052 | 6.744 |
| Cadmium | 111 | 0.0361 | 0.0503 | 0.0461 | **0.0442** | 0.0073 | 16.48 |
| Cadmium | 114 | 0.1976 | 0.1972 | 0.2006 | **0.1985** | 0.0018 | 0.9299 |
| Chromium | 52 | 5.986 | 5.869 | 5.84 | **5.898** | 0.0776 | 1.316 |
| Chromium | 53 | 5.974 | 5.913 | 5.955 | **5.947** | 0.0309 | 0.5195 |
| Cobalt | 59 | 1.519 | 1.48 | 1.497 | **1.499** | 0.0196 | 1.307 |
| Copper | 63 | 4.944 | 4.91 | 4.881 | **4.912** | 0.0313 | 0.6371 |
| Copper | 65 | 5.011 | 4.997 | 4.893 | **4.967** | 0.0647 | 1.304 |
| Lead | 206 | 4.556 | 4.685 | 4.619 | **4.62** | 0.0644 | 1.395 |
| Lead | 207 | 4.988 | 5.132 | 5.01 | **5.044** | 0.0776 | 1.538 |
| Lead | 208 | 4.82 | 4.97 | 4.881 | **4.89** | 0.0753 | 1.539 |
| Molybdenum | 95 | 0.2376 | 0.2248 | 0.2344 | **0.2323** | 0.0066 | 2.858 |
| Molybdenum | 97 | 0.241 | 0.2261 | 0.2239 | **0.2303** | 0.0093 | 4.052 |
| Molybdenum | 98 | 0.2396 | 0.2368 | 0.2383 | **0.2383** | 0.0014 | 0.587 |
| Nickel | 60 | 2.699 | 2.613 | 2.564 | **2.625** | 0.068 | 2.592 |
| Nickel | 62 | 3.504 | 3.286 | 3.334 | **3.375** | 0.1148 | 3.401 |
| Selenium | 77 | 0.2624 | 0.3809 | 0.311 | **0.3181** | 0.0595 | 18.71 |
| Selenium | 78 | 0.0823 | -0.1467 | -0.2691 | **-0.1112** | 0.1784 | 160.5 |
| Selenium | 82 | 0.1386 | 0.3732 | 0.4717 | **0.3278** | 0.1711 | 52.2 |
| Thallium | 203 | 0.117 | 0.123 | 0.1116 | **0.1172** | 0.0057 | 4.879 |
| Thallium | 205 | 0.1137 | 0.1147 | 0.1113 | **0.1132** | 0.0017 | 1.546 |
| Zinc | 66 | 21.14 | 21.09 | 21.18 | **21.13** | 0.0453 | 0.2142 |
| Zinc | 67 | 20.71 | 20.8 | 20.54 | **20.68** | 0.128 | 0.6191 |
| Zinc | 68 | 21.38 | 20.87 | 21.02 | **21.09** | 0.2602 | 1.234 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.002 | 1.025 | 1.022 | **1.002** | n/a | n/a |
| Gallium | 71 | 1.062 | 1.079 | 1.113 | **1.062** | n/a | n/a |
| Rhodium | 103 | 1.111 | 1.118 | 1.126 | **1.111** | n/a | n/a |
| Indium | 115 | 1.068 | 1.085 | 1.105 | **1.068** | n/a | n/a |
| Lutetium | 175 | 1.036 | 1.065 | 1.056 | **1.036** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008857-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:49 | | | | | |
| Arsenic | 75 | 4.068 | 4.131 | 4.217 | **4.139** | 0.0748 | 1.807 |
| Beryllium | 9 | 0.4549 | 0.4421 | 0.4296 | **0.4422** | 0.0126 | 2.856 |
| Cadmium | 111 | 1.481 | 1.471 | 1.459 | **1.47** | 0.0113 | 0.7663 |
| Cadmium | 114 | 1.871 | 1.879 | 1.864 | **1.871** | 0.0075 | 0.3994 |
| Chromium | 52 | 43.38 | 42.05 | 41.56 | **42.33** | 0.9427 | 2.227 |
| Chromium | 53 | 43.79 | 42.81 | 41.94 | **42.85** | 0.9256 | 2.16 |
| Cobalt | 59 | 5.9 | 5.861 | 5.821 | **5.861** | 0.0392 | 0.6694 |
| Copper | 63 | 69.05 | 68.24 | 67.49 | **68.26** | 0.7815 | 1.145 |
| Copper | 65 | 69.43 | 68.82 | 68.11 | **68.79** | 0.6625 | 0.9632 |
| Lead | 206 | 196.9 | 200.7 | 201.2 | **199.6** | 2.345 | 1.175 |
| Lead | 207 | 220.5 | 221.7 | 221.7 | **221.3** | 0.6789 | 0.3068 |
| Lead | 208 | 211.5 | 214.5 | 215.4 | **213.8** | 2.026 | 0.9479 |
| Molybdenum | 95 | 1.065 | 1.076 | 1.055 | **1.065** | 0.0102 | 0.9592 |
| Molybdenum | 97 | 1.058 | 1.067 | 1.118 | **1.081** | 0.0326 | 3.018 |
| Molybdenum | 98 | 1.101 | 1.07 | 1.041 | **1.071** | 0.0298 | 2.783 |
| Nickel | 60 | 19.16 | 18.93 | 18.51 | **18.87** | 0.3314 | 1.756 |
| Nickel | 62 | 19.94 | 19.67 | 19.54 | **19.72** | 0.2051 | 1.04 |
| Selenium | 77 | 1.268 | 1.112 | 1.017 | **1.132** | 0.1269 | 11.21 |
| Selenium | 78 | -0.2794 | -0.2364 | -0.4948 | **-0.3369** | 0.1384 | 41.09 |
| Selenium | 82 | 0.5303 | 0.5307 | 0.6127 | **0.5579** | 0.0475 | 8.505 |
| Thallium | 203 | 0.1202 | 0.1202 | 0.1243 | **0.1215** | 0.0024 | 1.951 |
| Thallium | 205 | 0.1202 | 0.1186 | 0.1145 | **0.1177** | 0.0029 | 2.501 |
| Zinc | 66 | 238.5 | 238.5 | 234.2 | **237** | 2.499 | 1.054 |
| Zinc | 67 | 224.1 | 219.5 | 218.5 | **220.7** | 2.964 | 1.343 |
| Zinc | 68 | 231.4 | 230.4 | 228.6 | **230.1** | 1.444 | 0.6275 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.033 | 1.036 | 1.047 | **1.033** | n/a | n/a |
| Gallium | 71 | 0.977 | 1.011 | 1.054 | **0.977** | n/a | n/a |
| Rhodium | 103 | 1.098 | 1.1 | 1.139 | **1.098** | n/a | n/a |
| Indium | 115 | 1.059 | 1.058 | 1.079 | **1.059** | n/a | n/a |
| Lutetium | 175 | 1.01 | 1.014 | 1.03 | **1.01** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008857-002 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:52 | | | | | |
| Arsenic | 75 | 5.28 | 5.399 | 5.436 | **5.372** | 0.0812 | 1.511 |
| Beryllium | 9 | 0.6712 | 0.6723 | 0.672 | **0.6718** | 0.0006 | 0.0873 |
| Cadmium | 111 | 4.188 | 4.321 | 4.303 | **4.271** | 0.0721 | 1.688 |
| Cadmium | 114 | 5.112 | 5.229 | 5.198 | **5.18** | 0.0608 | 1.174 |
| Chromium | 52 | 115.6 | 116 | 112.9 | **114.8** | 1.681 | 1.464 |
| Chromium | 53 | 115.5 | 116.1 | 114 | **115.2** | 1.085 | 0.9417 |
| Cobalt | 59 | 9.47 | 9.475 | 9.317 | **9.421** | 0.0897 | 0.9525 |
| Copper | 63 | 136.2 | 137.2 | 134 | **135.8** | 1.636 | 1.205 |
| Copper | 65 | 137 | 137.2 | 136.6 | **136.9** | 0.3274 | 0.2391 |
| Lead | 206 | 335.6 | 341.3 | 342.3 | **339.7** | 3.59 | 1.057 |
| Lead | 207 | 376 | 378.4 | 388.3 | **380.9** | 6.482 | 1.702 |
| Lead | 208 | 371.5 | 372.3 | 373.7 | **372.5** | 1.125 | 0.302 |
| Molybdenum | 95 | 1.622 | 1.689 | 1.648 | **1.653** | 0.0338 | 2.045 |
| Molybdenum | 97 | 1.613 | 1.665 | 1.689 | **1.656** | 0.0387 | 2.339 |
| Molybdenum | 98 | 1.661 | 1.663 | 1.635 | **1.653** | 0.0157 | 0.9509 |
| Nickel | 60 | 34.83 | 34.43 | 34.07 | **34.45** | 0.3802 | 1.104 |
| Nickel | 62 | 35.29 | 35.23 | 34.55 | **35.02** | 0.4128 | 1.179 |
| Selenium | 77 | 1.709 | 1.846 | 1.909 | **1.821** | 0.1021 | 5.606 |
| Selenium | 78 | -0.0557 | 0.1086 | -0.2053 | **-0.0508** | 0.157 | 309.1 |
| Selenium | 82 | 1.017 | 1.168 | 1.166 | **1.117** | 0.087 | 7.785 |
| Thallium | 203 | 0.1102 | 0.116 | 0.1178 | **0.1147** | 0.004 | 3.47 |
| Thallium | 205 | 0.1134 | 0.1118 | 0.1113 | **0.1122** | 0.0011 | 0.9698 |
| Zinc | 66 | 404.9 | 405.5 | 400.4 | **403.6** | 2.778 | 0.6882 |
| Zinc | 67 | 378.2 | 378.5 | 372.6 | **376.4** | 3.333 | 0.8854 |
| Zinc | 68 | 392.8 | 397.1 | 392.7 | **394.2** | 2.527 | 0.641 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.019 | 1.026 | 1.006 | **1.019** | n/a | n/a |
| Gallium | 71 | 1.025 | 1.051 | 1.065 | **1.025** | n/a | n/a |
| Rhodium | 103 | 1.142 | 1.152 | 1.163 | **1.142** | n/a | n/a |
| Indium | 115 | 1.086 | 1.092 | 1.099 | **1.086** | n/a | n/a |
| Lutetium | 175 | 1.029 | 1.036 | 1.052 | **1.029** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-MB 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:56 | | | | | |
| Arsenic | 75 | 0.0009 | 0.0376 | -0.0135 | **0.0083** | 0.0263 | 315.3 |
| Beryllium | 9 | 0.0002 | -0.0003 | 0.0007 | **0.0002** | 0.0005 | 246.7 |
| Cadmium | 111 | 0.0014 | 0.0054 | 0.0029 | **0.0033** | 0.002 | 62.12 |
| Cadmium | 114 | 0.2222 | 0.2075 | 0.207 | **0.2122** | 0.0086 | 4.061 |
| Chromium | 52 | 0.1208 | 0.1012 | 0.113 | **0.1117** | 0.0099 | 8.853 |
| Chromium | 53 | 0.1117 | 0.1078 | 0.0789 | **0.0995** | 0.018 | 18.04 |
| Cobalt | 59 | 0.0045 | 0.0035 | 0.0036 | **0.0039** | 0.0006 | 15.26 |
| Copper | 63 | -0.0018 | -0.0065 | -0.0048 | **-0.0044** | 0.0024 | 54.81 |
| Copper | 65 | 0.0037 | 0.0013 | -0.0061 | **-0.0004** | 0.0051 | 1424 |
| Lead | 206 | 0.1531 | 0.1448 | 0.1408 | **0.1462** | 0.0063 | 4.323 |
| Lead | 207 | 0.1816 | 0.1583 | 0.1513 | **0.1637** | 0.0159 | 9.687 |
| Lead | 208 | 0.1699 | 0.1528 | 0.1464 | **0.1564** | 0.0121 | 7.761 |
| Molybdenum | 95 | 0.0287 | 0.0253 | 0.0238 | **0.0259** | 0.0025 | 9.571 |
| Molybdenum | 97 | 0.016 | 0.0198 | 0.0215 | **0.0191** | 0.0028 | 14.63 |
| Molybdenum | 98 | 0.0203 | 0.0213 | 0.019 | **0.0202** | 0.0012 | 5.7 |
| Nickel | 60 | 0.0495 | 0.0514 | 0.056 | **0.0523** | 0.0033 | 6.364 |
| Nickel | 62 | 0.0545 | 0.04 | 0.1543 | **0.083** | 0.0622 | 75.02 |
| Selenium | 77 | -0.1073 | -0.0775 | -0.0022 | **-0.0624** | 0.0542 | 86.9 |
| Selenium | 78 | -0.1789 | -0.2802 | -0.3273 | **-0.2621** | 0.0758 | 28.93 |
| Selenium | 82 | -0.1294 | 0.0235 | -0.0798 | **-0.0619** | 0.078 | 125.9 |
| Thallium | 203 | -0.0006 | -0.0022 | -0.0007 | **-0.0012** | 0.0009 | 75.49 |
| Thallium | 205 | -0.0008 | -0.0009 | -0.0009 | **-0.0009** | 0.0001 | 10.13 |
| Zinc | 66 | 0.3534 | 0.3677 | 0.3394 | **0.3535** | 0.0142 | 4.012 |
| Zinc | 67 | 0.2878 | 0.2628 | 0.2504 | **0.267** | 0.0191 | 7.137 |
| Zinc | 68 | 0.3337 | 0.3243 | 0.3427 | **0.3336** | 0.0092 | 2.768 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.105 | 1.039 | 1.047 | **1.105** | n/a | n/a |
| Gallium | 71 | 1.15 | 1.123 | 1.139 | **1.15** | n/a | n/a |
| Rhodium | 103 | 1.132 | 1.107 | 1.104 | **1.132** | n/a | n/a |
| Indium | 115 | 1.109 | 1.081 | 1.079 | **1.109** | n/a | n/a |
| Lutetium | 175 | 1.081 | 1.06 | 1.069 | **1.081** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 13:59 | | | | | |
| Arsenic | 75 | 13.08 | 12.79 | 12.89 | **12.92** | 0.1457 | 1.128 |
| Beryllium | 9 | 1.055 | 1.061 | 1.036 | **1.051** | 0.0127 | 1.211 |
| Cadmium | 111 | 5.243 | 5.192 | 5.221 | **5.218** | 0.0256 | 0.4908 |
| Cadmium | 114 | 6.341 | 6.129 | 6.125 | **6.198** | 0.1239 | 1.999 |
| Chromium | 52 | 137 | 132 | 132.9 | **134** | 2.685 | 2.004 |
| Chromium | 53 | 140.5 | 135 | 134.6 | **136.7** | 3.283 | 2.402 |
| Cobalt | 59 | 13.9 | 13.44 | 13.54 | **13.63** | 0.2432 | 1.785 |
| Copper | 63 | 207.7 | 201.7 | 202 | **203.8** | 3.372 | 1.654 |
| Copper | 65 | 208.9 | 203.7 | 204.5 | **205.7** | 2.776 | 1.35 |
| Lead | 206 | 299.6 | 306.1 | 305.5 | **303.7** | 3.609 | 1.188 |
| Lead | 207 | 342.5 | 341.6 | 343.2 | **342.4** | 0.7706 | 0.225 |
| Lead | 208 | 331.1 | 333.4 | 331.7 | **332.1** | 1.195 | 0.3598 |
| Molybdenum | 95 | 2.807 | 2.81 | 2.804 | **2.807** | 0.0032 | 0.1126 |
| Molybdenum | 97 | 2.98 | 2.809 | 2.885 | **2.891** | 0.0856 | 2.959 |
| Molybdenum | 98 | 2.895 | 2.844 | 2.847 | **2.862** | 0.0283 | 0.9895 |
| Nickel | 60 | 41.47 | 40.55 | 40.66 | **40.89** | 0.5003 | 1.223 |
| Nickel | 62 | 43.45 | 42.01 | 42.34 | **42.6** | 0.7552 | 1.773 |
| Selenium | 77 | 3.184 | 3.629 | 3.152 | **3.322** | 0.2666 | 8.027 |
| Selenium | 78 | 0.4005 | 0.3864 | 0.6276 | **0.4715** | 0.1354 | 28.72 |
| Selenium | 82 | 2.395 | 2.315 | 2.412 | **2.374** | 0.0517 | 2.177 |
| Thallium | 203 | 0.3232 | 0.3217 | 0.324 | **0.323** | 0.0012 | 0.3711 |
| Thallium | 205 | 0.3156 | 0.3252 | 0.3314 | **0.3241** | 0.008 | 2.461 |
| Zinc | 66 | 688.7 | 677.3 | 680.5 | **682.2** | 5.85 | 0.8575 |
| Zinc | 67 | 634.1 | 626 | 620 | **626.7** | 7.096 | 1.132 |
| Zinc | 68 | 668.4 | 659.8 | 653.5 | **660.6** | 7.44 | 1.126 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.069 | 1.049 | 1.076 | **1.069** | n/a | n/a |
| Gallium | 71 | 1.047 | 1.087 | 1.12 | **1.047** | n/a | n/a |
| Rhodium | 103 | 1.235 | 1.26 | 1.293 | **1.235** | n/a | n/a |
| Indium | 115 | 1.164 | 1.174 | 1.202 | **1.164** | n/a | n/a |
| Lutetium | 175 | 1.074 | 1.089 | 1.098 | **1.074** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-001 1/5D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:03 | | | | | |
| Arsenic | 75 | 11.49 | 11.48 | 11.28 | **11.42** | 0.12 | 1.051 |
| Beryllium | 9 | 0.9938 | 0.976 | 0.8916 | **0.9538** | 0.0546 | 5.725 |
| Cadmium | 111 | 4.63 | 4.512 | 4.374 | **4.505** | 0.1281 | 2.844 |
| Cadmium | 114 | 5.404 | 5.294 | 5.277 | **5.325** | 0.0691 | 1.298 |
| Chromium | 52 | 127.7 | 122.3 | 121 | **123.7** | 3.554 | 2.873 |
| Chromium | 53 | 129.3 | 123.1 | 123.4 | **125.2** | 3.501 | 2.796 |
| Cobalt | 59 | 12.51 | 11.92 | 11.83 | **12.09** | 0.3692 | 3.055 |
| Copper | 63 | 189.8 | 184.4 | 183.5 | **185.9** | 3.433 | 1.847 |
| Copper | 65 | 191.5 | 185.9 | 186.8 | **188.1** | 3.038 | 1.616 |
| Lead | 206 | 269.7 | 277.4 | 269.9 | **272.3** | 4.396 | 1.614 |
| Lead | 207 | 308.9 | 314.1 | 306.2 | **309.7** | 4.007 | 1.294 |
| Lead | 208 | 296.5 | 306.3 | 297.8 | **300.2** | 5.337 | 1.778 |
| Molybdenum | 95 | 2.545 | 2.535 | 2.502 | **2.528** | 0.0227 | 0.896 |
| Molybdenum | 97 | 2.549 | 2.613 | 2.574 | **2.579** | 0.0318 | 1.234 |
| Molybdenum | 98 | 2.515 | 2.615 | 2.591 | **2.574** | 0.0525 | 2.038 |
| Nickel | 60 | 37.76 | 36.77 | 36.64 | **37.06** | 0.6076 | 1.64 |
| Nickel | 62 | 39.26 | 38.48 | 37.66 | **38.47** | 0.7978 | 2.074 |
| Selenium | 77 | 3.114 | 3.23 | 3.247 | **3.197** | 0.0729 | 2.279 |
| Selenium | 78 | 0.4881 | 0.4209 | 0.3241 | **0.411** | 0.0824 | 20.06 |
| Selenium | 82 | 2.172 | 2.094 | 2.419 | **2.228** | 0.1698 | 7.62 |
| Thallium | 203 | 0.2965 | 0.2974 | 0.2937 | **0.2959** | 0.0019 | 0.6526 |
| Thallium | 205 | 0.2852 | 0.2992 | 0.2954 | **0.2933** | 0.0072 | 2.465 |
| Zinc | 66 | 617.9 | 609.8 | 600.5 | **609.4** | 8.728 | 1.432 |
| Zinc | 67 | 573.5 | 559.8 | 560.7 | **564.7** | 7.647 | 1.354 |
| Zinc | 68 | 600.1 | 587 | 584.2 | **590.4** | 8.459 | 1.433 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.216 | 1.106 | 1.129 | **1.216** | n/a | n/a |
| Gallium | 71 | 1.124 | 1.133 | 1.15 | **1.124** | n/a | n/a |
| Rhodium | 103 | 1.27 | 1.294 | 1.293 | **1.27** | n/a | n/a |
| Indium | 115 | 1.209 | 1.194 | 1.192 | **1.209** | n/a | n/a |
| Lutetium | 175 | 1.093 | 1.115 | 1.092 | **1.093** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-001 1/25L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:06 | | | | | |
| Arsenic | 75 | 3.242 | 3.247 | 3.132 | **3.207** | 0.0648 | 2.022 |
| Beryllium | 9 | 0.2564 | 0.2533 | 0.2317 | **0.2471** | 0.0134 | 5.44 |
| Cadmium | 111 | 1.187 | 1.151 | 1.19 | **1.176** | 0.0216 | 1.837 |
| Cadmium | 114 | 1.383 | 1.4 | 1.374 | **1.386** | 0.0136 | 0.9824 |
| Chromium | 52 | 31.56 | 31.78 | 31.27 | **31.54** | 0.2532 | 0.8029 |
| Chromium | 53 | 32.52 | 32.01 | 31.67 | **32.07** | 0.4274 | 1.333 |
| Cobalt | 59 | 3.214 | 3.219 | 3.202 | **3.212** | 0.0088 | 0.2727 |
| Copper | 63 | 49.83 | 50.27 | 49.88 | **49.99** | 0.2409 | 0.4819 |
| Copper | 65 | 50.41 | 50.77 | 50.37 | **50.52** | 0.2187 | 0.4328 |
| Lead | 206 | 66.84 | 66.34 | 67.15 | **66.78** | 0.4073 | 0.6099 |
| Lead | 207 | 76.03 | 75.94 | 76.24 | **76.07** | 0.1575 | 0.2071 |
| Lead | 208 | 74.63 | 73.68 | 75.01 | **74.44** | 0.687 | 0.9229 |
| Molybdenum | 95 | 0.5949 | 0.5937 | 0.6181 | **0.6022** | 0.0138 | 2.283 |
| Molybdenum | 97 | 0.601 | 0.582 | 0.6107 | **0.5979** | 0.0146 | 2.439 |
| Molybdenum | 98 | 0.6006 | 0.5801 | 0.5954 | **0.592** | 0.0106 | 1.794 |
| Nickel | 60 | 9.909 | 10.09 | 9.989 | **9.995** | 0.0881 | 0.8817 |
| Nickel | 62 | 10.53 | 10.2 | 10.17 | **10.3** | 0.2006 | 1.948 |
| Selenium | 77 | 0.7938 | 1.013 | 0.7082 | **0.8382** | 0.1571 | 18.74 |
| Selenium | 78 | -0.184 | 0.0181 | -0.4261 | **-0.1973** | 0.2224 | 112.7 |
| Selenium | 82 | 0.6445 | 0.9417 | 0.7511 | **0.7791** | 0.1506 | 19.33 |
| Thallium | 203 | 0.0881 | 0.0844 | 0.089 | **0.0872** | 0.0025 | 2.836 |
| Thallium | 205 | 0.0857 | 0.0823 | 0.0866 | **0.0849** | 0.0023 | 2.693 |
| Zinc | 66 | 176.7 | 178.2 | 174.6 | **176.5** | 1.808 | 1.024 |
| Zinc | 67 | 164 | 165 | 163.8 | **164.3** | 0.6316 | 0.3845 |
| Zinc | 68 | 172.1 | 172.5 | 170.9 | **171.8** | 0.8199 | 0.4772 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.118 | 1.078 | 1.068 | **1.118** | n/a | n/a |
| Gallium | 71 | 1.197 | 1.201 | 1.195 | **1.197** | n/a | n/a |
| Rhodium | 103 | 1.22 | 1.191 | 1.206 | **1.22** | n/a | n/a |
| Indium | 115 | 1.179 | 1.161 | 1.165 | **1.179** | n/a | n/a |
| Lutetium | 175 | 1.125 | 1.106 | 1.116 | **1.125** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-001 1/5 +100A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:10 | | | | | |
| Arsenic | 75 | 99.13 | 98.37 | 97.32 | **98.27** | 0.9059 | 0.9218 |
| Beryllium | 9 | 97.3 | 98.04 | 93.89 | **96.41** | 2.213 | 2.296 |
| Cadmium | 111 | 100.3 | 102.4 | 100 | **100.9** | 1.268 | 1.256 |
| Cadmium | 114 | 102.9 | 103.2 | 101.6 | **102.6** | 0.8798 | 0.8578 |
| Chromium | 52 | 223.6 | 224 | 217.2 | **221.6** | 3.794 | 1.712 |
| Chromium | 53 | 225.8 | 223.4 | 218.1 | **222.4** | 3.967 | 1.783 |
| Cobalt | 59 | 98.07 | 98.13 | 95.5 | **97.23** | 1.504 | 1.547 |
| Copper | 63 | 274.5 | 273.4 | 279.9 | **275.9** | 3.527 | 1.278 |
| Copper | 65 | 287.4 | 285.7 | 284 | **285.7** | 1.704 | 0.5962 |
| Lead | 206 | 396.1 | 396.9 | 404.2 | **399.1** | 4.443 | 1.113 |
| Lead | 207 | 435.1 | 445.1 | 441.7 | **440.6** | 5.076 | 1.152 |
| Lead | 208 | 429.9 | 431.4 | 432.9 | **431.4** | 1.498 | 0.3472 |
| Molybdenum | 95 | 102.4 | 103.4 | 104 | **103.3** | 0.8307 | 0.8044 |
| Molybdenum | 97 | 104.3 | 106.1 | 103.8 | **104.7** | 1.196 | 1.142 |
| Molybdenum | 98 | 107 | 106.2 | 105.7 | **106.3** | 0.6583 | 0.6193 |
| Nickel | 60 | 123.9 | 123.7 | 121.6 | **123.1** | 1.262 | 1.025 |
| Nickel | 62 | 124.8 | 124.1 | 122.6 | **123.8** | 1.115 | 0.9006 |
| Selenium | 77 | 91.68 | 92.25 | 90.94 | **91.62** | 0.6552 | 0.7151 |
| Selenium | 78 | 89.05 | 87.71 | 87.4 | **88.05** | 0.8763 | 0.9953 |
| Selenium | 82 | 91.86 | 90.88 | 89.86 | **90.87** | 0.998 | 1.098 |
| Thallium | 203 | 100.9 | 100.9 | 100.6 | **100.8** | 0.132 | 0.131 |
| Thallium | 205 | 99.92 | 100.2 | 100.2 | **100.1** | 0.1617 | 0.1615 |
| Zinc | 66 | 766.3 | 757.6 | 749.8 | **757.9** | 8.257 | 1.089 |
| Zinc | 67 | 715.1 | 704.6 | 696.5 | **705.4** | 9.337 | 1.324 |
| Zinc | 68 | 745.1 | 740.7 | 726.4 | **737.4** | 9.768 | 1.325 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.152 | 1.169 | 1.145 | **1.152** | n/a | n/a |
| Gallium | 71 | 1.074 | 1.108 | 1.117 | **1.074** | n/a | n/a |
| Rhodium | 103 | 1.248 | 1.278 | 1.289 | **1.248** | n/a | n/a |
| Indium | 115 | 1.131 | 1.152 | 1.159 | **1.131** | n/a | n/a |
| Lutetium | 175 | 1.08 | 1.084 | 1.097 | **1.08** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | K1008862-001 1/25S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:13 | | | | | |
| Arsenic | 75 | 41.78 | 41.23 | 41.56 | **41.52** | 0.2735 | 0.6587 |
| Beryllium | 9 | 4.373 | 4.378 | 4.316 | **4.356** | 0.0345 | 0.7926 |
| Cadmium | 111 | 5.27 | 5.223 | 5.205 | **5.232** | 0.0336 | 0.642 |
| Cadmium | 114 | 5.371 | 5.46 | 5.466 | **5.432** | 0.0531 | 0.9766 |
| Chromium | 52 | 46.84 | 46.65 | 46.83 | **46.77** | 0.1078 | 0.2305 |
| Chromium | 53 | 47.39 | 46.88 | 46.88 | **47.05** | 0.297 | 0.6313 |
| Cobalt | 59 | 39.64 | 39.89 | 39.47 | **39.67** | 0.2107 | 0.5313 |
| Copper | 63 | 69.77 | 70.31 | 69.5 | **69.86** | 0.4092 | 0.5857 |
| Copper | 65 | 70.12 | 71.05 | 70.52 | **70.56** | 0.4686 | 0.6641 |
| Lead | 206 | 104.9 | 104.3 | 103 | **104.1** | 0.9924 | 0.9537 |
| Lead | 207 | 119.1 | 119.1 | 117.8 | **118.7** | 0.7614 | 0.6416 |
| Lead | 208 | 116.7 | 116 | 114.4 | **115.7** | 1.217 | 1.052 |
| Molybdenum | 95 | 37.32 | 37.46 | 37.48 | **37.42** | 0.0891 | 0.2382 |
| Molybdenum | 97 | 38.44 | 37.54 | 38.02 | **38** | 0.4518 | 1.189 |
| Molybdenum | 98 | 37.75 | 37.77 | 37.99 | **37.84** | 0.1324 | 0.3499 |
| Nickel | 60 | 46.64 | 46.53 | 46.78 | **46.65** | 0.1265 | 0.2711 |
| Nickel | 62 | 47.05 | 47.39 | 46.94 | **47.13** | 0.2345 | 0.4975 |
| Selenium | 77 | 40.6 | 41.63 | 41.2 | **41.15** | 0.5162 | 1.254 |
| Selenium | 78 | 41.12 | 39.86 | 40.39 | **40.46** | 0.6304 | 1.558 |
| Selenium | 82 | 42.12 | 40.44 | 41.49 | **41.35** | 0.8471 | 2.048 |
| Thallium | 203 | 39.4 | 39.2 | 38.87 | **39.16** | 0.2657 | 0.6786 |
| Thallium | 205 | 39.31 | 39.48 | 39.09 | **39.29** | 0.1972 | 0.5019 |
| Zinc | 66 | 214.2 | 215.5 | 214.2 | **214.6** | 0.7564 | 0.3524 |
| Zinc | 67 | 207.8 | 207.6 | 206.2 | **207.2** | 0.8509 | 0.4107 |
| Zinc | 68 | 212.4 | 213.4 | 214 | **213.3** | 0.8326 | 0.3904 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.158 | 1.139 | 1.107 | **1.158** | n/a | n/a |
| Gallium | 71 | 1.191 | 1.2 | 1.202 | **1.191** | n/a | n/a |
| Rhodium | 103 | 1.211 | 1.201 | 1.194 | **1.211** | n/a | n/a |
| Indium | 115 | 1.16 | 1.164 | 1.161 | **1.16** | n/a | n/a |
| Lutetium | 175 | 1.12 | 1.104 | 1.091 | **1.12** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | LCSS K1008862 1/100 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:17 | | | | | |
| Arsenic | 75 | 9.103 | 8.828 | 9.087 | **9.006** | 0.1547 | 1.718 |
| Beryllium | 9 | 6.138 | 5.963 | 5.849 | **5.983** | 0.1455 | 2.431 |
| Cadmium | 111 | 9.582 | 9.307 | 9.601 | **9.497** | 0.1644 | 1.731 |
| Cadmium | 114 | 9.51 | 9.301 | 9.425 | **9.412** | 0.1054 | 1.12 |
| Chromium | 52 | 13.74 | 13.37 | 13.33 | **13.48** | 0.2283 | 1.693 |
| Chromium | 53 | 13.75 | 13.6 | 13.3 | **13.55** | 0.2291 | 1.691 |
| Cobalt | 59 | 19.12 | 18.49 | 18.28 | **18.63** | 0.4342 | 2.33 |
| Copper | 63 | 22.67 | 22.33 | 21.99 | **22.33** | 0.3354 | 1.502 |
| Copper | 65 | 22.85 | 22.33 | 22.23 | **22.47** | 0.3338 | 1.486 |
| Lead | 206 | 9.809 | 9.612 | 9.783 | **9.734** | 0.1071 | 1.101 |
| Lead | 207 | 11.01 | 10.97 | 10.96 | **10.98** | 0.0271 | 0.2471 |
| Lead | 208 | 10.69 | 10.47 | 10.57 | **10.58** | 0.1128 | 1.067 |
| Molybdenum | 95 | 5.903 | 5.78 | 5.686 | **5.79** | 0.1087 | 1.877 |
| Molybdenum | 97 | 5.908 | 5.634 | 5.664 | **5.735** | 0.1503 | 2.62 |
| Molybdenum | 98 | 5.855 | 5.78 | 5.74 | **5.792** | 0.0585 | 1.01 |
| Nickel | 60 | 19.8 | 19.42 | 19.08 | **19.44** | 0.3586 | 1.845 |
| Nickel | 62 | 19.95 | 19.61 | 19.46 | **19.68** | 0.2502 | 1.272 |
| Selenium | 77 | 22.15 | 22.21 | 21.24 | **21.87** | 0.5416 | 2.476 |
| Selenium | 78 | 21.32 | 20.95 | 20.08 | **20.78** | 0.637 | 3.065 |
| Selenium | 82 | 21.59 | 20.98 | 21.09 | **21.22** | 0.3248 | 1.531 |
| Thallium | 203 | 25 | 24.45 | 25.03 | **24.83** | 0.325 | 1.309 |
| Thallium | 205 | 25.05 | 24.67 | 24.7 | **24.81** | 0.2116 | 0.8531 |
| Zinc | 66 | 30.49 | 30.02 | 29.86 | **30.12** | 0.3265 | 1.084 |
| Zinc | 67 | 30.48 | 30.59 | 29.71 | **30.26** | 0.48 | 1.586 |
| Zinc | 68 | 31.05 | 30.57 | 30.44 | **30.68** | 0.3219 | 1.049 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.123 | 1.101 | 1.083 | **1.123** | n/a | n/a |
| Gallium | 71 | 1.19 | 1.17 | 1.156 | **1.19** | n/a | n/a |
| Rhodium | 103 | 1.173 | 1.143 | 1.145 | **1.173** | n/a | n/a |
| Indium | 115 | 1.142 | 1.11 | 1.123 | **1.142** | n/a | n/a |
| Lutetium | 175 | 1.118 | 1.084 | 1.083 | **1.118** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCV3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:20 | | | | | |
| Arsenic | 75 | 25 | 24.76 | 25.17 | **24.98** | 0.2032 | 0.8135 |
| Beryllium | 9 | 24.74 | 24.66 | 23.49 | **24.3** | 0.7014 | 2.887 |
| Cadmium | 111 | 25.58 | 25.02 | 25.1 | **25.23** | 0.3049 | 1.208 |
| Cadmium | 114 | 25.36 | 25.11 | 24.58 | **25.02** | 0.3952 | 1.58 |
| Chromium | 52 | 24.28 | 24.01 | 23.94 | **24.08** | 0.178 | 0.7395 |
| Chromium | 53 | 24.35 | 23.99 | 23.69 | **24.01** | 0.3321 | 1.383 |
| Cobalt | 59 | 24.36 | 24.21 | 24.14 | **24.24** | 0.1102 | 0.4548 |
| Copper | 63 | 24.58 | 24.49 | 24.33 | **24.47** | 0.1265 | 0.5169 |
| Copper | 65 | 24.62 | 24.59 | 24.32 | **24.51** | 0.1618 | 0.6603 |
| Lead | 206 | 24.92 | 24.93 | 24.98 | **24.94** | 0.0292 | 0.1169 |
| Lead | 207 | 25.03 | 24.93 | 25.06 | **25.01** | 0.0716 | 0.2863 |
| Lead | 208 | 25.05 | 24.94 | 24.94 | **24.98** | 0.064 | 0.2562 |
| Molybdenum | 95 | 25.18 | 24.94 | 25.39 | **25.17** | 0.2293 | 0.9112 |
| Molybdenum | 97 | 25.54 | 25.13 | 25.31 | **25.33** | 0.2032 | 0.8025 |
| Molybdenum | 98 | 25.78 | 25.05 | 25.53 | **25.45** | 0.3727 | 1.464 |
| Nickel | 60 | 24.59 | 24.27 | 24.07 | **24.31** | 0.2649 | 1.09 |
| Nickel | 62 | 24.87 | 24.28 | 24.2 | **24.45** | 0.366 | 1.497 |
| Selenium | 77 | 25.66 | 26.08 | 25.15 | **25.63** | 0.4635 | 1.809 |
| Selenium | 78 | 25.03 | 25.24 | 24.92 | **25.06** | 0.1597 | 0.6372 |
| Selenium | 82 | 25.08 | 25.15 | 25.27 | **25.17** | 0.0914 | 0.3631 |
| Thallium | 203 | 24.91 | 25.1 | 25.01 | **25.01** | 0.0992 | 0.3968 |
| Thallium | 205 | 24.99 | 25.18 | 25.72 | **25.3** | 0.3785 | 1.496 |
| Zinc | 66 | 25.2 | 24.91 | 24.82 | **24.98** | 0.2017 | 0.8074 |
| Zinc | 67 | 25.13 | 24.79 | 24.63 | **24.85** | 0.256 | 1.03 |
| Zinc | 68 | 24.96 | 24.63 | 24.75 | **24.78** | 0.1636 | 0.6603 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.031 | 1.026 | 0.993 | **1.031** | n/a | n/a |
| Gallium | 71 | 1.141 | 1.129 | 1.133 | **1.141** | n/a | n/a |
| Rhodium | 103 | 1.121 | 1.112 | 1.113 | **1.121** | n/a | n/a |
| Indium | 115 | 1.111 | 1.082 | 1.071 | **1.111** | n/a | n/a |
| Lutetium | 175 | 1.07 | 1.06 | 1.052 | **1.07** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-07-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215618

| Sample Name: | | CCB3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/7/10 14:27 | | | | | |
| Arsenic | 75 | -0.009 | -0.0593 | -0.0047 | **-0.0243** | 0.0304 | 124.9 |
| Beryllium | 9 | 0.0082 | 0.0094 | 0.0074 | **0.0083** | 0.001 | 11.93 |
| Cadmium | 111 | 0.0026 | 0.0076 | 0.0084 | **0.0062** | 0.0031 | 50.4 |
| Cadmium | 114 | 0.0066 | 0.0082 | 0.0093 | **0.008** | 0.0014 | 17.19 |
| Chromium | 52 | -0.0498 | -0.0366 | -0.0609 | **-0.0491** | 0.0122 | 24.87 |
| Chromium | 53 | -0.0603 | -0.054 | -0.0438 | **-0.0527** | 0.0083 | 15.84 |
| Cobalt | 59 | 0.0035 | 0.007 | 0.0065 | **0.0057** | 0.0019 | 33.43 |
| Copper | 63 | 0.0057 | 0.0055 | 0.0077 | **0.0063** | 0.0012 | 19.16 |
| Copper | 65 | -0.0025 | 0.0017 | -0.0034 | **-0.0014** | 0.0027 | 194.8 |
| Lead | 206 | 0.0086 | 0.0103 | 0.0108 | **0.0099** | 0.0012 | 12.01 |
| Lead | 207 | 0.0089 | 0.0071 | 0.0085 | **0.0082** | 0.0009 | 11.12 |
| Lead | 208 | 0.0079 | 0.01 | 0.0094 | **0.0091** | 0.0011 | 11.92 |
| Molybdenum | 95 | 0.0306 | 0.0382 | 0.0308 | **0.0332** | 0.0044 | 13.11 |
| Molybdenum | 97 | 0.0296 | 0.0344 | 0.0248 | **0.0296** | 0.0048 | 16.34 |
| Molybdenum | 98 | 0.0388 | 0.0282 | 0.0299 | **0.0323** | 0.0057 | 17.51 |
| Nickel | 60 | 0.0067 | 0.0163 | 0.0101 | **0.011** | 0.0048 | 43.88 |
| Nickel | 62 | 0.0512 | 0.0985 | 0.0294 | **0.0597** | 0.0353 | 59.19 |
| Selenium | 77 | -0.0866 | -0.02 | -0.0297 | **-0.0454** | 0.036 | 79.29 |
| Selenium | 78 | -0.1227 | -0.3072 | -0.0128 | **-0.1476** | 0.1487 | 100.8 |
| Selenium | 82 | -0.1339 | -0.2738 | -0.0326 | **-0.1468** | 0.1211 | 82.52 |
| Thallium | 203 | 0.0105 | 0.0149 | 0.011 | **0.0121** | 0.0024 | 20.19 |
| Thallium | 205 | 0.0086 | 0.0127 | 0.0123 | **0.0112** | 0.0022 | 19.99 |
| Zinc | 66 | -0.0011 | 0.0081 | 0.0023 | **0.0031** | 0.0046 | 148.6 |
| Zinc | 67 | -0.0392 | -0.0197 | -0.0127 | **-0.0239** | 0.0137 | 57.43 |
| Zinc | 68 | 0.0046 | 0.0107 | 0.0286 | **0.0146** | 0.0125 | 85.46 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.025 | 1.015 | 1.002 | **1.025** | n/a | n/a |
| Gallium | 71 | 1.116 | 1.128 | 1.123 | **1.116** | n/a | n/a |
| Rhodium | 103 | 1.109 | 1.112 | 1.104 | **1.109** | n/a | n/a |
| Indium | 115 | 1.103 | 1.089 | 1.092 | **1.103** | n/a | n/a |
| Lutetium | 175 | 1.084 | 1.08 | 1.066 | **1.084** | n/a | n/a |

Service Request # K1008857 (HCl)_____
Calibration _____090310C_____
QC in calibration__090310C_____
QC Service Request K1008857_____
STARLIMS Batch # 215397_____

# ICP-MS Data Review Form

| | Yes | No | NA |
|---|---|---|---|
| 1. Appropriate standardization completed | X | | |
| 2. ICV within 10 % of true value | X | | |
| 3. CCV's in control | X | | |
| 4. CCB's and/or ICB's below MRL | X | | |
| 5. Method blank below MRL | X | | |
| 6. LCS in control | X | | |
| 7. Spike and duplicate in control | X | | |
| 8. All analytes within instrument linear range | X | | |
| 9. Adequate rinse out time allowed | X | | |
| 10. Internal standards in control | X | | |
| 11. Interferences checked | X | | |
| 12. Se over MRL | | | X |
| 13. CRA run | X | | |
| 14. ICSA and ICSAB in control | X | | |
| 15. Serial dilution run | X | | |
| 16. Post spike in control | X | | |

Comments: Report Ag-109.

Primary Review by _____ Date 9/3/10
Secondary Review by JDB Date 9/3/10
R:\icp\misc\data review forms\PQ ExCell review form

## Sample List

| Num | Label | Type | Weight | Volume | Dilution | Rack | Row | Column | Height |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Cal. Blk | Blank | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 2 | Cal. Stn | Fully Quant Standard | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 3 | ICV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 3 | 145 |
| 4 | CCV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 5 | ICB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 6 | CCB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 7 | SOIL CRA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 4 | 145 |
| 8 | ICSA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 5 | 145 |
| 9 | ICSAB | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 6 | 145 |
| 10 | K1008969-MB 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 1 | 145 |
| 11 | K1008969-006 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 3 | 145 |
| 12 | K1008969-006 1/25L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 4 | 145 |
| 13 | K1008969-006 1/5 +10/50A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 5 | 145 |
| 14 | K1008969-006 1/25S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 6 | 145 |
| 15 | K1008969-006 1/25SD | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 7 | 145 |
| 16 | LCSW K1008969 1/100 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 2 | 145 |
| 17 | K1008969-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 8 | 145 |
| 18 | K1008969-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 9 | 145 |
| 19 | K1008969-003 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 10 | 145 |
| 20 | CCV2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 21 | CCB2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 22 | K1008969-004 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 11 | 145 |
| 23 | K1008969-005 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 12 | 145 |
| 24 | K1008969-007 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 1 | 145 |
| 25 | K1008969-008 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 2 | 145 |
| 26 | K1008969-009 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 3 | 145 |
| 27 | K1008969-010 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 4 | 145 |
| 28 | K1008969-011 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 5 | 145 |
| 29 | K1008969-012 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 6 | 145 |
| 30 | K1008969-013 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 7 | 145 |
| 31 | K1008969-014 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 8 | 145 |
| 32 | CCV3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 33 | CCB3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 34 | K1008969-015 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 9 | 145 |
| 35 | K1008857-MB 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 10 | 145 |
| 36 | K1008857-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 12 | 145 |
| 37 | K1008857-001 1/5D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 1 | 145 |
| 38 | K1008857-001 1/25L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 2 | 145 |
| 39 | K1008857-001 1/5 +10/50A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 3 | 145 |
| 40 | K1008857-001 1/25S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 4 | 145 |
| 41 | LCSS K1008857 1/10 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 11 | 145 |
| 42 | CCV2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 43 | CCB2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 44 | K1008857-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 5 | 145 |
| 45 | K1008775-001 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 6 | 145 |
| 46 | K1008775-001 1/5D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 7 | 145 |
| 47 | K1008775-001 1/25S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 8 | 145 |
| 48 | K1008775-002 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 9 | 145 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49 | K1008775-003 1/5 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 10 | 145 |
| 50 | CCV3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 51 | CCB3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |

## Instrument Setup - Configurations

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 8:01:31 9/3/10
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -550.00 |
| Lens1 | 5.00 |
| Lens2 | -75.00 |
| Lens3 | -25.00 |
| Pole Bias | 5.00 |
| Sampling Depth | 400.00 |
| Horizontal | 0.00 |
| Vertical | 70.00 |
| Cool | 13.00 |
| Auxiliary | 0.80 |
| Nebuliser | 0.82 |
| Forward power | 1,365.00 |
| HT1 Voltage | 1,900.00 |
| HT2 Voltage | 2,600.00 |
| D1 | -38.00 |
| Focus | 10.00 |

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 8:01:31 9/3/10
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -550.00 |
| Lens1 | 5.00 |
| Lens2 | -75.00 |
| Lens3 | -25.00 |
| Pole Bias | 5.00 |
| Sampling Depth | 400.00 |
| Horizontal | 0.00 |
| Vertical | 70.00 |
| Cool | 13.00 |
| Auxiliary | 0.80 |

ExCell Mass Calibration

Date: 9/3/2010

| Mass | Mass DAC | Peak Width (AMU) | Error (AMU) | Include | Masses in Tune Solution |
|---|---|---|---|---|---|
| 6.015 | 1299 | 0.766 | -0.021 | TRUE | |
| 7.016 | 1553 | 0.715 | -0.018 | TRUE | Li-7 |
| 9.012 | 2060 | 0.715 | -0.014 | TRUE | Be-9 |
| 23.985 | 5871 | 0.715 | -0.017 | TRUE | Mg-24 |
| 24.986 | 6118 | 0.715 | 0.014 | TRUE | Co-59 |
| 25.983 | 6378 | 0.715 | -0.011 | TRUE | In-115 |
| 51.94 | 12979 | 0.715 | 0.014 | TRUE | Ce-140 |
| 53.949 | 13492 | 0.766 | 0.008 | TRUE | Pb-208 |
| 55.935 | 13993 | 0.817 | 0.026 | TRUE | Bi-209 |
| 57.934 | 14506 | 0.766 | 0.01 | TRUE | U-238 |
| 58.933 | 14753 | 0.766 | 0.039 | TRUE | |
| 69.925 | 17561 | 0.766 | 0.002 | TRUE | |
| 75.92 | 19082 | 0.766 | 0.024 | TRUE | |
| 77.919 | 19589 | 0.766 | 0.032 | TRUE | |
| 112.904 | 28507 | 0.714 | 0.004 | TRUE | |
| 114.904 | 29014 | 0.714 | 0.013 | TRUE | |
| 118.903 | 30067 | 0.714 | -0.121 | FALSE | |
| 128.905 | 32595 | 0.663 | -0.042 | TRUE | |
| 130.905 | 33102 | 0.663 | -0.031 | TRUE | |
| 131.905 | 33356 | 0.714 | -0.028 | TRUE | |
| 139.905 | 35390 | 0.663 | -0.01 | TRUE | |
| 141.908 | 35904 | 0.714 | -0.024 | TRUE | |
| 155.923 | 39472 | 0.663 | -0.01 | TRUE | |
| 205.974 | 52225 | 0.663 | 0.017 | TRUE | |
| 206.976 | 52485 | 0.663 | -0.001 | TRUE | |
| 207.977 | 52739 | 0.612 | 0.004 | TRUE | |
| 208.98 | 52992 | 0.663 | 0.015 | TRUE | |
| 238.051 | 60409 | 0.612 | 0.005 | TRUE | |

SHORT TERM STABILITY 09-03-10.vge

Excluded In Calib | Excluded In Results | Peak Fit Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

| Run | Label | TimeStamp | 5Mg | 7Li | 9Be | 59Co | 115In | 208Pb |
|---|---|---|---|---|---|---|---|---|
| 1 | Stability 09-03-2010 | 9/3/2010 8:14:10 AM | (P)0.000 | (P)21033.473 | (P)5283.310 | (P)61543.466 | (P)94615.705 | (P)40047.890 |
| 2 | Stability 09-03-2010 | 9/3/2010 8:15:25 AM | (P)0.167 | (P)21254.800 | (P)5340.498 | (P)62024.211 | (P)95208.428 | (P)40912.168 |
| 3 | Stability 09-03-2010 | 9/3/2010 8:16:40 AM | (P)0.000 | (P)21014.946 | (P)5291.146 | (P)61541.778 | (P)96139.527 | (P)41210.856 |
| 4 | Stability 09-03-2010 | 9/3/2010 8:17:55 AM | (P)0.333 | (P)21013.778 | (P)5289.479 | (P)61198.474 | (P)96012.813 | (P)41860.743 |
| 5 | Stability 09-03-2010 | 9/3/2010 8:19:10 AM | (P)0.667 | (P)20791.286 | (P)5300.983 | (P)60375.495 | (P)94953.603 | (P)41672.027 |
| | Mean of Stability 09-03 | 9/3/2010 8:14:10 AM | (P)0.233 | (P)21021.657 | (P)5301.083 | (P)61336.685 | (P)95386.015 | (P)41140.737 |
| | SD of Stability 09-03-20 | | (P)0.279 | (P)164.068 | (P)22.928 | (P)612.475 | (P)665.686 | (P)716.267 |
| | %RSD of Stability 09 | | (P)119.523 | (P)0.780 | (P)0.433 | (P)0.999 | (P)0.698 | (P)1.741 |

| Run | Label | TimeStamp | 209Bi | 220Rn | 238U |
|---|---|---|---|---|---|
| 1 | Stability 09-03-2010 | 9/3/2010 8:14:10 AM | (P)64937.759 | (P)0.000 | (P)71514.741 |
| 2 | Stability 09-03-2010 | 9/3/2010 8:15:25 AM | (P)66205.727 | (P)0.000 | (P)73509.500 |
| 3 | Stability 09-03-2010 | 9/3/2010 8:16:40 AM | (P)66790.113 | (P)0.167 | (P)74437.107 |
| 4 | Stability 09-03-2010 | 9/3/2010 8:17:55 AM | (P)66689.975 | (P)0.000 | (P)75417.400 |
| 5 | Stability 09-03-2010 | 9/3/2010 8:19:10 AM | (P)66390.251 | (P)0.167 | (P)75255.054 |
| | Mean of Stability 09-03 | 9/3/2010 8:14:10 AM | (P)66202.765 | (P)0.067 | (P)74026.760 |
| | SD of Stability 09-03-20 | | (P)744.606 | (P)0.091 | (P)1595.992 |
| | %RSD of Stability 09 | | (P)1.125 | (P)136.931 | (P)2.156 |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | Cal. Blk | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 11:56 | | | | | |
| Antimony | 121 | -0.0008 | -0.0036 | 0.0045 | **0** | 0.0041 | 0 |
| Antimony | 123 | 0.0005 | -0.0019 | 0.0013 | **0** | 0.0017 | 0 |
| Silver | 107 | -0.0003 | 0.0008 | -0.0005 | **0** | 0.0007 | 0 |
| Silver | 109 | -0.0005 | -0.0001 | 0.0006 | **0** | 0.0006 | 0 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.005 | 0.997 | 0.998 | **1.005** | n/a | n/a |
| Indium | 115 | 1.008 | 0.998 | 0.994 | **1.008** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | Cal. Stn | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 11:58 | | | | | |
| Antimony | 121 | 24.75 | 25.13 | 25.12 | **25** | 0.219 | 0.8759 |
| Antimony | 123 | 24.77 | 25.34 | 24.89 | **25** | 0.2972 | 1.189 |
| Silver | 107 | 24.86 | 25.09 | 25.05 | **25** | 0.1208 | 0.483 |
| Silver | 109 | 24.86 | 24.92 | 25.22 | **25** | 0.192 | 0.7681 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 0.977 | 0.978 | 0.97 | **0.977** | n/a | n/a |
| Indium | 115 | 0.969 | 0.97 | 0.972 | **0.969** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | ICV1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:00 | | | | | |
| Antimony | 121 | 24.77 | 24.9 | 25.17 | **24.95** | 0.1992 | 0.7985 |
| Antimony | 123 | 24.9 | 24.93 | 25.25 | **25.03** | 0.1962 | 0.7839 |
| Silver | 107 | 13.28 | 13.4 | 13.51 | **13.4** | 0.1122 | 0.8379 |
| Silver | 109 | 13.19 | 13.54 | 13.31 | **13.35** | 0.1752 | 1.312 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.001 | 0.999 | 1.003 | **1.001** | n/a | n/a |
| Indium | 115 | 0.988 | 0.991 | 0.992 | **0.988** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCV1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:03 | | | | | |
| Antimony | 121 | 24.86 | 24.96 | 25.27 | **25.03** | 0.2168 | 0.8663 |
| Antimony | 123 | 25.28 | 25 | 25.66 | **25.31** | 0.3332 | 1.316 |
| Silver | 107 | 24.69 | 25.28 | 24.89 | **24.95** | 0.3016 | 1.209 |
| Silver | 109 | 25.02 | 24.99 | 24.9 | **24.97** | 0.0632 | 0.2531 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 0.985 | 0.993 | 0.983 | **0.985** | n/a | n/a |
| Indium | 115 | 0.982 | 0.979 | 0.983 | **0.982** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | ICB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:10 | | | | | |
| Antimony | 121 | 0.0417 | 0.0336 | 0.033 | **0.0361** | 0.0049 | 13.51 |
| Antimony | 123 | 0.0344 | 0.0321 | 0.0264 | **0.031** | 0.0041 | 13.33 |
| Silver | 107 | 0.0088 | 0.0101 | 0.0084 | **0.0091** | 0.0009 | 9.785 |
| Silver | 109 | 0.0084 | 0.0089 | 0.0058 | **0.0077** | 0.0017 | 21.64 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.023 | 1.016 | 1.016 | **1.023** | n/a | n/a |
| Indium | 115 | 1.026 | 1.017 | 1.004 | **1.026** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:13 | | | | | |
| Antimony | 121 | 0.0171 | 0.0216 | 0.0123 | **0.017** | 0.0046 | 27.3 |
| Antimony | 123 | 0.0216 | 0.0145 | 0.0133 | **0.0165** | 0.0045 | 27.26 |
| Silver | 107 | 0.0051 | 0.0055 | 0.005 | **0.0052** | 0.0002 | 4.261 |
| Silver | 109 | 0.0058 | 0.0045 | 0.0036 | **0.0046** | 0.0011 | 23.18 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.013 | 1.013 | 1.02 | **1.013** | n/a | n/a |
| Indium | 115 | 1.027 | 1.013 | 0.999 | **1.027** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | SOIL CRA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:15 | | | | | |
| Antimony | 121 | 0.1135 | 0.1194 | 0.1058 | **0.1129** | 0.0069 | 6.073 |
| Antimony | 123 | 0.1179 | 0.1104 | 0.1146 | **0.1143** | 0.0038 | 3.291 |
| Silver | 107 | 0.0441 | 0.0436 | 0.0439 | **0.0439** | 0.0003 | 0.5931 |
| Silver | 109 | 0.0418 | 0.0418 | 0.0437 | **0.0424** | 0.0011 | 2.639 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.009 | 1.002 | 0.998 | **1.009** | n/a | n/a |
| Indium | 115 | 1.013 | 0.994 | 1.008 | **1.013** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | ICSA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:17 | | | | | |
| Antimony | 121 | 0.0696 | 0.0667 | 0.0814 | **0.0726** | 0.0078 | 10.74 |
| Antimony | 123 | 0.0699 | 0.0704 | 0.0716 | **0.0706** | 0.0009 | 1.214 |
| Silver | 107 | 0.1104 | 0.1098 | 0.1146 | **0.1116** | 0.0026 | 2.314 |
| Silver | 109 | 0.1074 | 0.1071 | 0.1043 | **0.1063** | 0.0017 | 1.595 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.174 | 1.162 | 1.16 | **1.174** | n/a | n/a |
| Indium | 115 | 1.119 | 1.118 | 1.121 | **1.119** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-~~10C~~
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | ICSAB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:20 | | | | | |
| Antimony | 121 | 0.0669 | 0.0669 | 0.0654 | **0.0664** | 0.0009 | 1.302 |
| Antimony | 123 | 0.0788 | 0.0731 | 0.064 | **0.072** | 0.0075 | 10.37 |
| Silver | 107 | 14.03 | 13.74 | 13.93 | **13.9** | 0.1478 | 1.063 |
| Silver | 109 | 13.83 | 13.86 | 13.8 | **13.83** | 0.0316 | 0.2285 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.178 | 1.158 | 1.159 | **1.178** | n/a | n/a |
| Indium | 115 | 1.113 | 1.119 | 1.114 | **1.113** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-MB 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:28 | | | | | |
| Antimony | 121 | -0.0307 | -0.0306 | -0.0313 | **-0.0308** | 0.0004 | 1.176 |
| Antimony | 123 | -0.0311 | -0.0292 | -0.0329 | **-0.0311** | 0.0018 | 5.877 |
| Silver | 107 | 0.0099 | 0.0092 | 0.0078 | **0.009** | 0.001 | 11.53 |
| Silver | 109 | 0.0085 | 0.0091 | 0.0077 | **0.0084** | 0.0007 | 8.715 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.059 | 1.049 | 1.057 | **1.059** | n/a | n/a |
| Indium | 115 | 1.041 | 1.043 | 1.051 | **1.041** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-006 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:31 | | | | | |
| Antimony | 121 | 1.483 | 1.47 | 1.49 | **1.481** | 0.0099 | 0.6694 |
| Antimony | 123 | 1.466 | 1.46 | 1.487 | **1.471** | 0.0145 | 0.9835 |
| Silver | 107 | 0.1715 | 0.1723 | 0.1733 | **0.1723** | 0.0009 | 0.5134 |
| Silver | 109 | 0.1358 | 0.1411 | 0.1329 | **0.1366** | 0.0042 | 3.042 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.092 | 1.094 | 1.084 | **1.092** | n/a | n/a |
| Indium | 115 | 1.063 | 1.055 | 1.073 | **1.063** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-006 1/25L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:34 | | | | | |
| Antimony | 121 | 0.2666 | 0.2711 | 0.2693 | **0.269** | 0.0023 | 0.8499 |
| Antimony | 123 | 0.2646 | 0.2629 | 0.2714 | **0.2663** | 0.0045 | 1.697 |
| Silver | 107 | 0.0335 | 0.0338 | 0.0315 | **0.0329** | 0.0012 | 3.784 |
| Silver | 109 | 0.0238 | 0.024 | 0.0239 | **0.0239** | 0.0001 | 0.3778 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.055 | 1.047 | 1.04 | **1.055** | n/a | n/a |
| Indium | 115 | 1.047 | 1.032 | 1.036 | **1.047** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-006 1/5 +10/50A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:37 | | | | | |
| Antimony | 121 | 50.23 | 49.75 | 49.46 | **49.82** | 0.3878 | 0.7785 |
| Antimony | 123 | 50.36 | 49.98 | 48.82 | **49.72** | 0.8009 | 1.611 |
| Silver | 107 | 10.12 | 10.01 | 10.11 | **10.08** | 0.0601 | 0.5965 |
| Silver | 109 | 9.892 | 9.918 | 9.862 | **9.891** | 0.0283 | 0.2857 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.075 | 1.078 | 1.069 | **1.075** | n/a | n/a |
| Indium | 115 | 1.033 | 1.033 | 1.031 | **1.033** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-006 1/25S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:40 | | | | | |
| Antimony | 121 | 21.64 | 22.53 | 22.85 | **22.34** | 0.626 | 2.803 |
| Antimony | 123 | 21.83 | 22.02 | 22.78 | **22.21** | 0.5025 | 2.263 |
| Silver | 107 | 3.949 | 4.051 | 4.14 | **4.047** | 0.0959 | 2.37 |
| Silver | 109 | 3.894 | 4.028 | 4.127 | **4.017** | 0.1169 | 2.911 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.034 | 1.044 | 1.057 | **1.034** | n/a | n/a |
| Indium | 115 | 1.011 | 1.032 | 1.055 | **1.011** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-006 1/25SD | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:43 | | | | | |
| Antimony | 121 | 22.72 | 22.96 | 23.01 | **22.9** | 0.1581 | 0.6907 |
| Antimony | 123 | 22.78 | 22.79 | 22.71 | **22.76** | 0.042 | 0.1844 |
| Silver | 107 | 4.086 | 4.072 | 4.105 | **4.088** | 0.0164 | 0.4004 |
| Silver | 109 | 4.01 | 4.023 | 4.058 | **4.03** | 0.0246 | 0.6104 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.034 | 1.026 | 1.044 | **1.034** | n/a | n/a |
| Indium | 115 | 1.016 | 1.025 | 1.025 | **1.016** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | LCSW K1008969 1/100 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:46 | | | | | |
| Antimony | 121 | 10.35 | 10.11 | 10.3 | **10.25** | 0.1254 | 1.223 |
| Antimony | 123 | 10.27 | 10.19 | 10.24 | **10.23** | 0.0391 | 0.3824 |
| Silver | 107 | 0.9971 | 0.9803 | 0.9959 | **0.9911** | 0.0094 | 0.9494 |
| Silver | 109 | 0.9828 | 0.9745 | 0.9768 | **0.978** | 0.0043 | 0.4402 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.006 | 1 | 1.007 | **1.006** | n/a | n/a |
| Indium | 115 | 1.013 | 0.994 | 1.001 | **1.013** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:50 | | | | | |
| Antimony | 121 | 0.6029 | 0.5958 | 0.6085 | **0.6024** | 0.0064 | 1.061 |
| Antimony | 123 | 0.622 | 0.6167 | 0.5855 | **0.6081** | 0.0197 | 3.243 |
| Silver | 107 | 0.1811 | 0.1779 | 0.1716 | **0.1769** | 0.0048 | 2.737 |
| Silver | 109 | 0.1675 | 0.1616 | 0.1578 | **0.1623** | 0.0049 | 2.997 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.088 | 1.08 | 1.071 | **1.088** | n/a | n/a |
| Indium | 115 | 1.058 | 1.05 | 1.058 | **1.058** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-002 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:54 | | | | | |
| Antimony | 121 | 0.2596 | 0.2519 | 0.2676 | **0.2597** | 0.0079 | 3.025 |
| Antimony | 123 | 0.2504 | 0.2634 | 0.2641 | **0.2593** | 0.0077 | 2.97 |
| Silver | 107 | 0.0662 | 0.0658 | 0.0663 | **0.0661** | 0.0002 | 0.3765 |
| Silver | 109 | 0.0629 | 0.0613 | 0.0589 | **0.061** | 0.002 | 3.35 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.065 | 1.073 | 1.064 | **1.065** | n/a | n/a |
| Indium | 115 | 1.046 | 1.054 | 1.043 | **1.046** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-003 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 12:57 | | | | | |
| Antimony | 121 | 0.3157 | 0.3331 | 0.333 | **0.3273** | 0.01 | 3.064 |
| Antimony | 123 | 0.3234 | 0.3343 | 0.3366 | **0.3314** | 0.0071 | 2.135 |
| Silver | 107 | 0.0857 | 0.0858 | 0.0876 | **0.0864** | 0.0011 | 1.284 |
| Silver | 109 | 0.0778 | 0.0833 | 0.0761 | **0.0791** | 0.0038 | 4.798 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.055 | 1.058 | 1.052 | **1.055** | n/a | n/a |
| Indium | 115 | 1.036 | 1.041 | 1.036 | **1.036** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCV2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:00 | | | | | |
| Antimony | 121 | 25.05 | 25.15 | 24.8 | **25** | 0.1791 | 0.7164 |
| Antimony | 123 | 25.03 | 25.22 | 25.05 | **25.1** | 0.1085 | 0.4324 |
| Silver | 107 | 25.19 | 25.07 | 24.93 | **25.06** | 0.1258 | 0.502 |
| Silver | 109 | 24.98 | 25.23 | 25.08 | **25.1** | 0.1281 | 0.5106 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.011 | 1 | 0.993 | **1.011** | n/a | n/a |
| Indium | 115 | 0.999 | 0.988 | 0.985 | **0.999** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCB2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:05 | | | | | |
| Antimony | 121 | 0.0019 | 0.0001 | -0.0051 | **-0.001** | 0.0037 | 350.4 |
| Antimony | 123 | 0.0004 | -0.0029 | -0.0077 | **-0.0034** | 0.0041 | 120.4 |
| Silver | 107 | 0.0052 | 0.0049 | 0.0036 | **0.0046** | 0.0009 | 19.09 |
| Silver | 109 | 0.0041 | 0.0037 | 0.003 | **0.0036** | 0.0006 | 15.71 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.013 | 1.011 | 1.001 | **1.013** | n/a | n/a |
| Indium | 115 | 1.021 | 1.014 | 1.006 | **1.021** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-004 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:07 | | | | | |
| Antimony | 121 | 0.3034 | 0.3038 | 0.3023 | **0.3032** | 0.0008 | 0.2524 |
| Antimony | 123 | 0.3119 | 0.3007 | 0.3107 | **0.3078** | 0.0062 | 2.004 |
| Silver | 107 | 0.0976 | 0.0945 | 0.096 | **0.096** | 0.0015 | 1.6 |
| Silver | 109 | 0.0858 | 0.0825 | 0.0855 | **0.0846** | 0.0018 | 2.157 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.056 | 1.043 | 1.061 | **1.056** | n/a | n/a |
| Indium | 115 | 1.048 | 1.053 | 1.046 | **1.048** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-005 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:09 | | | | | |
| Antimony | 121 | 0.3148 | 0.3184 | 0.3088 | **0.314** | 0.0049 | 1.555 |
| Antimony | 123 | 0.3225 | 0.3279 | 0.3237 | **0.3247** | 0.0028 | 0.8708 |
| Silver | 107 | 0.0588 | 0.0571 | 0.0551 | **0.057** | 0.0018 | 3.242 |
| Silver | 109 | 0.0542 | 0.0516 | 0.0507 | **0.0522** | 0.0018 | 3.462 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.058 | 1.052 | 1.046 | **1.058** | n/a | n/a |
| Indium | 115 | 1.038 | 1.034 | 1.031 | **1.038** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-007 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:12 | | | | | |
| Antimony | 121 | 0.8384 | 0.8161 | 0.823 | **0.8258** | 0.0114 | 1.38 |
| Antimony | 123 | 0.8204 | 0.8032 | 0.8203 | **0.8147** | 0.0099 | 1.213 |
| Silver | 107 | 0.2039 | 0.2072 | 0.2028 | **0.2046** | 0.0023 | 1.111 |
| Silver | 109 | 0.1584 | 0.1593 | 0.1585 | **0.1587** | 0.0005 | 0.3374 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.072 | 1.067 | 1.072 | **1.072** | n/a | n/a |
| Indium | 115 | 1.05 | 1.054 | 1.059 | **1.05** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-008 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:14 | | | | | |
| Antimony | 121 | 0.8067 | 0.8078 | 0.7931 | **0.8025** | 0.0082 | 1.021 |
| Antimony | 123 | 0.7945 | 0.8046 | 0.8019 | **0.8003** | 0.0052 | 0.6523 |
| Silver | 107 | 0.2211 | 0.2237 | 0.2246 | **0.2231** | 0.0018 | 0.8202 |
| Silver | 109 | 0.1719 | 0.1738 | 0.1692 | **0.1716** | 0.0023 | 1.327 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.082 | 1.089 | 1.095 | **1.082** | n/a | n/a |
| Indium | 115 | 1.073 | 1.08 | 1.074 | **1.073** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-009 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:16 | | | | | |
| Antimony | 121 | 0.2532 | 0.2511 | 0.2561 | **0.2535** | 0.0025 | 1.004 |
| Antimony | 123 | 0.2571 | 0.2472 | 0.2459 | **0.2501** | 0.0061 | 2.433 |
| Silver | 107 | 0.0519 | 0.0522 | 0.0544 | **0.0528** | 0.0014 | 2.604 |
| Silver | 109 | 0.0431 | 0.0426 | 0.0429 | **0.0429** | 0.0003 | 0.5871 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.078 | 1.076 | 1.074 | **1.078** | n/a | n/a |
| Indium | 115 | 1.066 | 1.074 | 1.064 | **1.066** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-010 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:18 | | | | | |
| Antimony | 121 | 0.8433 | 0.8466 | 0.8583 | **0.8494** | 0.0079 | 0.9274 |
| Antimony | 123 | 0.8485 | 0.8649 | 0.8602 | **0.8579** | 0.0085 | 0.9865 |
| Silver | 107 | 0.2331 | 0.2316 | 0.2333 | **0.2327** | 0.001 | 0.4109 |
| Silver | 109 | 0.1926 | 0.1927 | 0.1937 | **0.193** | 0.0006 | 0.3163 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.104 | 1.109 | 1.094 | **1.104** | n/a | n/a |
| Indium | 115 | 1.07 | 1.071 | 1.079 | **1.07** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-011 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:21 | | | | | |
| Antimony | 121 | 0.663 | 0.6467 | 0.654 | **0.6545** | 0.0082 | 1.246 |
| Antimony | 123 | 0.6444 | 0.63 | 0.6492 | **0.6412** | 0.01 | 1.556 |
| Silver | 107 | 0.1174 | 0.1132 | 0.1136 | **0.1147** | 0.0023 | 2.028 |
| Silver | 109 | 0.1087 | 0.1069 | 0.1116 | **0.109** | 0.0024 | 2.173 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.086 | 1.075 | 1.08 | **1.086** | n/a | n/a |
| Indium | 115 | 1.08 | 1.052 | 1.07 | **1.08** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-012 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:23 | | | | | |
| Antimony | 121 | 0.1694 | 0.1603 | 0.1612 | **0.1636** | 0.005 | 3.055 |
| Antimony | 123 | 0.1666 | 0.1589 | 0.1596 | **0.1617** | 0.0043 | 2.636 |
| Silver | 107 | 0.0461 | 0.0445 | 0.0446 | **0.0451** | 0.0009 | 2.036 |
| Silver | 109 | 0.0383 | 0.039 | 0.0394 | **0.0389** | 0.0006 | 1.476 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.067 | 1.06 | 1.059 | **1.067** | n/a | n/a |
| Indium | 115 | 1.051 | 1.043 | 1.038 | **1.051** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-013 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:25 | | | | | |
| Antimony | 121 | 0.1686 | 0.1678 | 0.1648 | **0.1671** | 0.002 | 1.207 |
| Antimony | 123 | 0.1689 | 0.1564 | 0.1641 | **0.1631** | 0.0063 | 3.879 |
| Silver | 107 | 0.0367 | 0.0364 | 0.0375 | **0.0369** | 0.0006 | 1.501 |
| Silver | 109 | 0.0286 | 0.0345 | 0.0327 | **0.0319** | 0.003 | 9.363 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.061 | 1.073 | 1.075 | **1.061** | n/a | n/a |
| Indium | 115 | 1.065 | 1.046 | 1.052 | **1.065** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-014 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:27 | | | | | |
| Antimony | 121 | 0.1992 | 0.2023 | 0.1901 | **0.1972** | 0.0063 | 3.202 |
| Antimony | 123 | 0.1967 | 0.2003 | 0.1885 | **0.1952** | 0.006 | 3.09 |
| Silver | 107 | 0.0478 | 0.047 | 0.0452 | **0.0467** | 0.0014 | 2.911 |
| Silver | 109 | 0.0408 | 0.0388 | 0.0393 | **0.0396** | 0.001 | 2.63 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.068 | 1.061 | 1.052 | **1.068** | n/a | n/a |
| Indium | 115 | 1.057 | 1.043 | 1.033 | **1.057** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCV3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:29 | | | | | |
| Antimony | 121 | 24.6 | 25.15 | 24.9 | **24.88** | 0.2774 | 1.115 |
| Antimony | 123 | 25.41 | 25.04 | 24.83 | **25.09** | 0.2938 | 1.171 |
| Silver | 107 | 24.83 | 24.9 | 25.12 | **24.95** | 0.1526 | 0.6117 |
| Silver | 109 | 25.06 | 24.92 | 25 | **24.99** | 0.0688 | 0.2751 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.004 | 0.994 | 0.999 | **1.004** | n/a | n/a |
| Indium | 115 | 1 | 0.996 | 0.983 | **1** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCB3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:34 | | | | | |
| Antimony | 121 | -0.014 | -0.0137 | -0.0152 | **-0.0143** | 0.0008 | 5.47 |
| Antimony | 123 | -0.0133 | -0.0131 | -0.0117 | **-0.0127** | 0.0009 | 6.982 |
| Silver | 107 | 0.0045 | 0.0038 | 0.0037 | **0.004** | 0.0004 | 10.19 |
| Silver | 109 | 0.0035 | 0.0026 | 0.0031 | **0.0031** | 0.0004 | 14.28 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.006 | 0.984 | 0.999 | **1.006** | n/a | n/a |
| Indium | 115 | 1.011 | 1.009 | 1.004 | **1.011** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008969-015 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:36 | | | | | |
| Antimony | 121 | 0.2068 | 0.2055 | 0.2062 | **0.2062** | 0.0006 | 0.3122 |
| Antimony | 123 | 0.2122 | 0.2111 | 0.1898 | **0.2044** | 0.0126 | 6.168 |
| Silver | 107 | 0.0566 | 0.0574 | 0.0518 | **0.0553** | 0.003 | 5.439 |
| Silver | 109 | 0.051 | 0.0502 | 0.0487 | **0.05** | 0.0011 | 2.267 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.062 | 1.059 | 1.051 | **1.062** | n/a | n/a |
| Indium | 115 | 1.044 | 1.041 | 1.043 | **1.044** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-MB 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:38 | | | | | |
| Antimony | 121 | -0.0395 | -0.041 | -0.038 | **-0.0395** | 0.0015 | 3.883 |
| Antimony | 123 | -0.0401 | -0.0395 | -0.0404 | **-0.04** | 0.0005 | 1.235 |
| Silver | 107 | 0.0031 | 0.0025 | 0.0017 | **0.0024** | 0.0007 | 29.52 |
| Silver | 109 | 0.0004 | 0.0025 | 0.0013 | **0.0014** | 0.001 | 72.96 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.014 | 0.997 | 0.998 | **1.014** | n/a | n/a |
| Indium | 115 | 1.026 | 1.008 | 1.005 | **1.026** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:41 | | | | | |
| Antimony | 121 | 0.5877 | 0.5873 | 0.5694 | **0.5814** | 0.0105 | 1.799 |
| Antimony | 123 | 0.5848 | 0.589 | 0.5959 | **0.5899** | 0.0056 | 0.9498 |
| Silver | 107 | 1.515 | 1.534 | 1.52 | **1.523** | 0.0099 | 0.6519 |
| Silver | 109 | 1.486 | 1.496 | 1.518 | **1.5** | 0.0162 | 1.077 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.085 | 1.093 | 1.096 | **1.085** | n/a | n/a |
| Indium | 115 | 1.066 | 1.053 | 1.058 | **1.066** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-001 1/5D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:49 | | | | | |
| Antimony | 121 | 0.5926 | 0.5928 | 0.579 | **0.5881** | 0.0079 | 1.34 |
| Antimony | 123 | 0.6037 | 0.5838 | 0.597 | **0.5949** | 0.0101 | 1.702 |
| Silver | 107 | 1.526 | 1.521 | 1.526 | **1.524** | 0.0027 | 0.1773 |
| Silver | 109 | 1.475 | 1.481 | 1.49 | **1.482** | 0.0074 | 0.497 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.103 | 1.1 | 1.09 | **1.103** | n/a | n/a |
| Indium | 115 | 1.065 | 1.06 | 1.075 | **1.065** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-001 1/25L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:51 | | | | | |
| Antimony | 121 | 0.1079 | 0.1061 | 0.1153 | **0.1098** | 0.0049 | 4.426 |
| Antimony | 123 | 0.1089 | 0.1084 | 0.1096 | **0.1089** | 0.0006 | 0.5682 |
| Silver | 107 | 0.3491 | 0.3558 | 0.3583 | **0.3544** | 0.0047 | 1.335 |
| Silver | 109 | 0.3344 | 0.3446 | 0.3418 | **0.3403** | 0.0053 | 1.548 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.055 | 1.056 | 1.051 | **1.055** | n/a | n/a |
| Indium | 115 | 1.05 | 1.038 | 1.049 | **1.05** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-001 1/5 +10/50A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:53 | | | | | |
| Antimony | 121 | 47.98 | 47.67 | 48.1 | **47.92** | 0.2232 | 0.4658 |
| Antimony | 123 | 48.41 | 48.6 | 48.16 | **48.39** | 0.2215 | 0.4577 |
| Silver | 107 | 11.53 | 11.27 | 11.63 | **11.48** | 0.1865 | 1.625 |
| Silver | 109 | 11.29 | 11.21 | 11.29 | **11.26** | 0.041 | 0.3641 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.121 | 1.121 | 1.132 | **1.121** | n/a | n/a |
| Indium | 115 | 1.075 | 1.062 | 1.073 | **1.075** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-001 1/25S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:55 | | | | | |
| Antimony | 121 | 25.23 | 25.18 | 25.11 | **25.17** | 0.0569 | 0.2261 |
| Antimony | 123 | 25.85 | 25.12 | 25.5 | **25.49** | 0.3672 | 1.441 |
| Silver | 107 | 4.241 | 4.254 | 4.288 | **4.261** | 0.0246 | 0.5772 |
| Silver | 109 | 4.201 | 4.175 | 4.201 | **4.193** | 0.0149 | 0.3549 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.093 | 1.102 | 1.109 | **1.093** | n/a | n/a |
| Indium | 115 | 1.011 | 1.008 | 1.017 | **1.011** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | LCSS K1008857 1/10 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 13:57 | | | | | |
| Antimony | 121 | 8.615 | 8.627 | 8.578 | **8.607** | 0.0253 | 0.2935 |
| Antimony | 123 | 8.696 | 8.651 | 8.446 | **8.598** | 0.1333 | 1.55 |
| Silver | 107 | 7.617 | 7.765 | 7.81 | **7.731** | 0.1008 | 1.303 |
| Silver | 109 | 7.565 | 7.637 | 7.661 | **7.621** | 0.05 | 0.6558 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.078 | 1.096 | 1.093 | **1.078** | n/a | n/a |
| Indium | 115 | 1.077 | 1.07 | 1.064 | **1.077** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCV2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:00 | | | | | |
| Antimony | 121 | 24.67 | 24.91 | 24.63 | **24.74** | 0.1505 | 0.6083 |
| Antimony | 123 | 25.06 | 25.06 | 24.53 | **24.88** | 0.3068 | 1.233 |
| Silver | 107 | 25.24 | 25.48 | 24.77 | **25.16** | 0.3642 | 1.447 |
| Silver | 109 | 25.15 | 25.41 | 25.13 | **25.23** | 0.158 | 0.6262 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.083 | 1.076 | 1.061 | **1.083** | n/a | n/a |
| Indium | 115 | 1.08 | 1.08 | 1.061 | **1.08** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCB2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:07 | | | | | |
| Antimony | 121 | -0.0027 | -0.0052 | -0.0034 | **-0.0038** | 0.0013 | 34.02 |
| Antimony | 123 | -0.0023 | -0.0073 | -0.0063 | **-0.0053** | 0.0026 | 49.16 |
| Silver | 107 | 0.0142 | 0.0121 | 0.0128 | **0.013** | 0.0011 | 8.425 |
| Silver | 109 | 0.011 | 0.0104 | 0.0096 | **0.0103** | 0.0007 | 6.792 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.088 | 1.064 | 1.068 | **1.088** | n/a | n/a |
| Indium | 115 | 1.096 | 1.067 | 1.07 | **1.096** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008857-002 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:09 | | | | | |
| Antimony | 121 | 0.8174 | 0.7926 | 0.7944 | **0.8015** | 0.0139 | 1.728 |
| Antimony | 123 | 0.8124 | 0.7797 | 0.7975 | **0.7965** | 0.0164 | 2.057 |
| Silver | 107 | 5.287 | 5.28 | 5.238 | **5.268** | 0.0268 | 0.5078 |
| Silver | 109 | 5.177 | 5.214 | 5.178 | **5.189** | 0.021 | 0.4049 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.108 | 1.116 | 1.102 | **1.108** | n/a | n/a |
| Indium | 115 | 1.061 | 1.04 | 1.052 | **1.061** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008775-001 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:11 | | | | | |
| Antimony | 121 | 0.0268 | 0.0225 | 0.023 | **0.0241** | 0.0024 | 9.818 |
| Antimony | 123 | 0.0345 | 0.0291 | 0.0218 | **0.0285** | 0.0063 | 22.29 |
| Silver | 107 | 0.0452 | 0.0415 | 0.0455 | **0.0441** | 0.0022 | 5.043 |
| Silver | 109 | 0.044 | 0.0423 | 0.0407 | **0.0423** | 0.0016 | 3.88 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.18 | 1.164 | 1.161 | **1.18** | n/a | n/a |
| Indium | 115 | 1.157 | 1.14 | 1.145 | **1.157** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008775-001 1/5D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:13 | | | | | |
| Antimony | 121 | 0.0107 | 0.0105 | 0.0198 | **0.0137** | 0.0053 | 39.07 |
| Antimony | 123 | 0.0122 | 0.0171 | 0.0151 | **0.0148** | 0.0025 | 16.61 |
| Silver | 107 | 0.0335 | 0.0324 | 0.0327 | **0.0329** | 0.0005 | 1.639 |
| Silver | 109 | 0.0309 | 0.0324 | 0.0278 | **0.0304** | 0.0024 | 7.757 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.166 | 1.147 | 1.156 | **1.166** | n/a | n/a |
| Indium | 115 | 1.139 | 1.129 | 1.129 | **1.139** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008775-001 1/25S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:16 | | | | | |
| Antimony | 121 | 30.56 | 30.69 | 30.88 | **30.71** | 0.1639 | 0.5336 |
| Antimony | 123 | 30.65 | 30.85 | 30.35 | **30.62** | 0.2496 | 0.8154 |
| Silver | 107 | 3.86 | 3.906 | 3.822 | **3.863** | 0.0418 | 1.082 |
| Silver | 109 | 3.82 | 3.873 | 3.774 | **3.823** | 0.0495 | 1.294 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.051 | 1.064 | 1.051 | **1.051** | n/a | n/a |
| Indium | 115 | 0.986 | 0.996 | 0.996 | **0.986** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008775-002 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:19 | | | | | |
| Antimony | 121 | 0.2058 | 0.2068 | 0.1972 | **0.2032** | 0.0053 | 2.611 |
| Antimony | 123 | 0.2064 | 0.1987 | 0.2027 | **0.2026** | 0.0039 | 1.904 |
| Silver | 107 | 0.173 | 0.1735 | 0.1725 | **0.173** | 0.0005 | 0.3027 |
| Silver | 109 | 0.1716 | 0.1637 | 0.1691 | **0.1681** | 0.004 | 2.39 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.218 | 1.2 | 1.214 | **1.218** | n/a | n/a |
| Indium | 115 | 1.172 | 1.173 | 1.172 | **1.172** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | K1008775-003 1/5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:22 | | | | | |
| Antimony | 121 | 0.0182 | 0.0123 | 0.0131 | **0.0145** | 0.0032 | 21.87 |
| Antimony | 123 | 0.0135 | 0.0227 | 0.0253 | **0.0205** | 0.0062 | 30.33 |
| Silver | 107 | 0.0303 | 0.0302 | 0.0327 | **0.0311** | 0.0014 | 4.517 |
| Silver | 109 | 0.0333 | 0.0309 | 0.0281 | **0.0308** | 0.0026 | 8.475 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.17 | 1.157 | 1.156 | **1.17** | n/a | n/a |
| Indium | 115 | 1.134 | 1.129 | 1.127 | **1.134** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCV3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:24 | | | | | |
| Antimony | 121 | 24.72 | 25.12 | 24.5 | **24.78** | 0.3155 | 1.273 |
| Antimony | 123 | 24.73 | 24.71 | 24.73 | **24.73** | 0.0104 | 0.042 |
| Silver | 107 | 24.8 | 25.19 | 25.22 | **25.07** | 0.2316 | 0.9238 |
| Silver | 109 | 24.98 | 25.08 | 25.31 | **25.12** | 0.1725 | 0.6866 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.07 | 1.074 | 1.08 | **1.07** | n/a | n/a |
| Indium | 115 | 1.071 | 1.078 | 1.062 | **1.071** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-03-10C
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #215397

| Sample Name: | | CCB3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/3/10 14:28 | | | | | |
| Antimony | 121 | -0.0064 | -0.0097 | -0.0098 | **-0.0086** | 0.002 | 22.81 |
| Antimony | 123 | -0.0095 | -0.0123 | -0.0086 | **-0.0101** | 0.0019 | 19.14 |
| Silver | 107 | 0.0093 | 0.0074 | 0.0071 | **0.0079** | 0.0012 | 15.15 |
| Silver | 109 | 0.0073 | 0.0054 | 0.0052 | **0.006** | 0.0012 | 19.64 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rhodium | 103 | 1.108 | 1.101 | 1.09 | **1.108** | n/a | n/a |
| Indium | 115 | 1.12 | 1.085 | 1.095 | **1.12** | n/a | n/a |

# Columbia Analytical Services

## - Cover Page -
## INORGANIC ANALYSIS DATA PACKAGE

**Client:** Windward Environmental, LLC
**Project Name:** Passaic RI/FS Sediment
**Project No.:** Task 18.8.1

**Service Request:** K1008857

| Sample Name: | Lab Code: |
|---|---|
| LPRC07C-RB | K1008857-003 |
| LPRC07C-RBD | K1008857-003D |
| LPRC07C-RBS | K1008857-003S |
| Method Blank | K1008857-MB |
| Batch QC1D | K1009089-001D |
| Batch QC1S | K1009089-001S |
| Batch QC2D | K1009161-001D |
| Batch QC2S | K1009161-001S |
| Batch QC3D | K1009702-003D |
| Batch QC3S | K1009702-003S |

**Comments:**

**Approved By:** _____ **Date:** 9/29/10

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | 08/16/10 |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** LPRC07C-RB **Lab Code:** K1008857-003

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6020 | 2.0 | 0.3 | 1.0 | 09/20/10 | 09/22/10 | 1.4 | J | |
| Antimony | 6020 | 0.05 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.02 | U | |
| Arsenic | 6020 | 0.50 | 0.07 | 1.0 | 09/20/10 | 09/22/10 | 0.07 | U | |
| Barium | 6020 | 0.05 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.24 | | |
| Beryllium | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.007 | J | |
| Cadmium | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.015 | J | |
| Calcium | 6010B | 50.0 | 6.0 | 1.0 | 09/20/10 | 09/21/10 | 8.7 | J | |
| Chromium | 6020 | 0.20 | 0.04 | 1.0 | 09/20/10 | 09/22/10 | 0.17 | J | |
| Cobalt | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.010 | J | |
| Copper | 6020 | 0.10 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.08 | J | |
| Iron | 6010B | 20.0 | 0.8 | 1.0 | 09/20/10 | 09/21/10 | 0.8 | U | |
| Lead | 6020 | 0.020 | 0.005 | 1.0 | 09/20/10 | 09/22/10 | 0.015 | J | |
| Magnesium | 6010B | 20.0 | 0.3 | 1.0 | 09/20/10 | 09/21/10 | 0.8 | J | |
| Manganese | 6020 | 0.05 | 0.01 | 1.0 | 09/20/10 | 09/22/10 | 0.24 | | |
| Nickel | 6020 | 0.20 | 0.03 | 1.0 | 09/20/10 | 09/22/10 | 0.08 | J | |
| Potassium | 6010B | 400 | 40 | 1.0 | 09/20/10 | 09/21/10 | 40 | U | |
| Selenium | 7742 | 1.0 | 0.2 | 2.0 | 09/01/10 | 09/08/10 | 0.2 | U | |
| Silver | 6020 | 0.020 | 0.004 | 1.0 | 09/20/10 | 09/22/10 | 0.004 | U | |
| Sodium | 6010B | 100 | 20 | 1.0 | 09/20/10 | 09/21/10 | 42 | J | |
| Thallium | 6020 | 0.020 | 0.002 | 1.0 | 09/20/10 | 09/22/10 | 0.012 | J | |
| Titanium | 6010B | 10.0 | 0.4 | 1.0 | 09/23/10 | 09/27/10 | 0.4 | U | |
| Vanadium | 6020 | 0.20 | 0.03 | 1.0 | 09/20/10 | 09/22/10 | 0.03 | U | |
| Zinc | 6020 | 0.50 | 0.20 | 1.0 | 09/20/10 | 09/22/10 | 1.02 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project No.:** | Task 18.8.1 | **Date Collected:** | |
| **Project Name:** | Passaic RI/FS Sediment | **Date Received:** | |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** Method Blank **Lab Code:** K1008857-MB

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6020 | 2.0 | 0.3 | 1.0 | 09/20/10 | 09/22/10 | 0.5 | J | |
| Antimony | 6020 | 0.05 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.02 | U | |
| Arsenic | 6020 | 0.50 | 0.07 | 1.0 | 09/20/10 | 09/22/10 | 0.07 | U | |
| Barium | 6020 | 0.05 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.02 | J | |
| Beryllium | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.003 | J | |
| Cadmium | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.007 | J | |
| Calcium | 6010B | 50.0 | 6.0 | 1.0 | 09/20/10 | 09/21/10 | 6.0 | U | |
| Chromium | 6020 | 0.20 | 0.04 | 1.0 | 09/20/10 | 09/22/10 | 0.04 | U | |
| Cobalt | 6020 | 0.020 | 0.003 | 1.0 | 09/20/10 | 09/22/10 | 0.008 | J | |
| Copper | 6020 | 0.10 | 0.02 | 1.0 | 09/20/10 | 09/22/10 | 0.03 | J | |
| Iron | 6010B | 20.0 | 0.8 | 1.0 | 09/20/10 | 09/21/10 | 0.8 | U | |
| Lead | 6020 | 0.020 | 0.005 | 1.0 | 09/20/10 | 09/22/10 | 0.008 | J | |
| Magnesium | 6010B | 20.0 | 0.3 | 1.0 | 09/20/10 | 09/21/10 | 0.3 | U | |
| Manganese | 6020 | 0.05 | 0.01 | 1.0 | 09/20/10 | 09/22/10 | 0.03 | J | |
| Nickel | 6020 | 0.20 | 0.03 | 1.0 | 09/20/10 | 09/22/10 | 0.03 | U | |
| Potassium | 6010B | 400 | 40 | 1.0 | 09/20/10 | 09/21/10 | 40 | U | |
| Selenium | 7742 | 1.0 | 0.2 | 2.0 | 09/01/10 | 09/08/10 | 0.2 | U | |
| Silver | 6020 | 0.020 | 0.004 | 1.0 | 09/20/10 | 09/22/10 | 0.004 | U | |
| Sodium | 6010B | 100 | 20 | 1.0 | 09/20/10 | 09/21/10 | 22 | J | |
| Thallium | 6020 | 0.020 | 0.002 | 1.0 | 09/20/10 | 09/22/10 | 0.011 | J | |
| Titanium | 6010B | 10.0 | 0.4 | 1.0 | 09/23/10 | 09/27/10 | 0.4 | U | |
| Vanadium | 6020 | 0.20 | 0.03 | 1.0 | 09/20/10 | 09/22/10 | 0.03 | U | |
| Zinc | 6020 | 0.50 | 0.20 | 1.0 | 09/20/10 | 09/22/10 | 0.42 | J | |

**% Solids:** 0.0

Comments:

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | 100.0 | 103.3 | 103 | 25.0 | 24.0 | 96 | 24.9 | 100 | 6020 |
| Antimony | 25.0 | 26.1 | 104 | 25.0 | 25.2 | 101 | 24.7 | 99 | 6020 |
| Arsenic | 25.0 | 26.9 | 108 | 25.0 | 25.0 | 100 | 24.8 | 99 | 6020 |
| Barium | 100.0 | 105.8 | 106 | 25.0 | 24.8 | 99 | 24.6 | 98 | 6020 |
| Beryllium | 2.5 | 2.7 | 108 | 25.0 | 23.4 | 94 | 25.7 | 103 | 6020 |
| Cadmium | 12.5 | 13.4 | 107 | 25.0 | 25.0 | 100 | 24.9 | 100 | 6020 |
| Calcium | 5000 | 5122 | 102 | 2500 | 2457 | 98 | 2435 | 97 | 6010B |
| Calcium | 12500 | 12738 | 102 | 25000 | 25715 | 103 | 25781 | 103 | 6010B |
| Chromium | 10.0 | 10.6 | 106 | 25.0 | 25.0 | 100 | 24.9 | 100 | 6020 |
| Cobalt | 25.0 | 26.8 | 107 | 25.0 | 24.9 | 100 | 25.0 | 100 | 6020 |
| Copper | 12.5 | 13.3 | 106 | 25.0 | 24.8 | 99 | 25.0 | 100 | 6020 |
| Iron | 2500 | 2430 | 97 | 500 | 490 | 98 | 498 | 100 | 6010B |
| Iron | 10000 | 9983 | 100 | 25000 | 24926 | 100 | 24724 | 99 | 6010B |
| Lead | 25.0 | 25.9 | 104 | 25.0 | 24.6 | 98 | 24.7 | 99 | 6020 |
| Magnesium | 5000 | 5000 | 100 | 2000 | 1979 | 99 | 1971 | 99 | 6010B |
| Magnesium | 12500 | 12487 | 100 | 25000 | 25011 | 100 | 25166 | 101 | 6010B |
| Manganese | 25.0 | 26.9 | 108 | 25.0 | 25.0 | 100 | 25.0 | 100 | 6020 |
| Nickel | 25.0 | 26.6 | 106 | 25.0 | 25.2 | 101 | 25.4 | 102 | 6020 |
| Potassium | 12500 | 12906 | 103 | 10000 | 10080 | 101 | 10133 | 101 | 6010B |
| Selenium | 7.50 | 7.93 | 106 | 7.50 | 7.47 | 100 | 7.49 | 100 | 7742 |
| Silver | 12.5 | 12.6 | 101 | 25.0 | 24.3 | 97 | 24.7 | 99 | 6020 |
| Sodium | 12500 | 12493 | 100 | 10000 | 9673 | 97 | 9709 | 97 | 6010B |
| Thallium | 25.0 | 26.2 | 105 | 25.0 | 24.9 | 100 | 25.0 | 100 | 6020 |
| Titanium | 2000 | 2039 | 102 | 250 | 249 | 100 | 248 | 99 | 6010B |
| Vanadium | 25.0 | 27.1 | 108 | 25.0 | 25.0 | 100 | 25.1 | 100 | 6020 |
| Zinc | 25.0 | 26.6 | 106 | 25.0 | 24.8 | 99 | 24.6 | 98 | 6020 |

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | 25.0 | 25.5 | 102 | 24.2 | 97 | 6020 |
| Antimony | | | | 25.0 | 24.7 | 99 | 25.4 | 102 | 6020 |
| Arsenic | | | | 25.0 | 25.8 | 103 | 25.2 | 101 | 6020 |
| Barium | | | | 25.0 | 24.9 | 100 | 24.4 | 98 | 6020 |
| Beryllium | | | | 25.0 | 24.6 | 98 | 25.1 | 100 | 6020 |
| Cadmium | | | | 25.0 | 25.1 | 100 | 25.2 | 101 | 6020 |
| Calcium | | | | 2500 | 2551 | 102 | 2505 | 100 | 6010B |
| Calcium | | | | 25000 | 25785 | 103 | 24635 | 99 | 6010B |
| Chromium | | | | 25.0 | 24.7 | 99 | 24.7 | 99 | 6020 |
| Cobalt | | | | 25.0 | 24.9 | 100 | 24.3 | 97 | 6020 |
| Copper | | | | 25.0 | 24.7 | 99 | 24.3 | 97 | 6020 |
| Iron | | | | 500 | 491 | 98 | 485 | 97 | 6010B |
| Iron | | | | 25000 | 24147 | 97 | 23454 | 94 | 6010B |
| Lead | | | | 25.0 | 24.7 | 99 | 24.3 | 97 | 6020 |
| Magnesium | | | | 2000 | 1963 | 98 | 1945 | 97 | 6010B |
| Magnesium | | | | 25000 | 25114 | 100 | 24698 | 99 | 6010B |
| Manganese | | | | 25.0 | 25.1 | 100 | 24.7 | 99 | 6020 |
| Nickel | | | | 25.0 | 25.2 | 101 | 24.6 | 98 | 6020 |
| Potassium | | | | 10000 | 9825 | 98 | 9947 | 99 | 6010B |
| Selenium | | | | 7.50 | 7.50 | 100 | | | 7742 |
| Silver | | | | 25.0 | 24.8 | 99 | 24.4 | 98 | 6020 |
| Sodium | | | | 10000 | 9453 | 95 | 9749 | 97 | 6010B |
| Thallium | | | | 25.0 | 25.2 | 101 | 24.5 | 98 | 6020 |
| Titanium | | | | 250 | 247 | 99 | | | 6010B |
| Vanadium | | | | 25.0 | 25.3 | 101 | 25.0 | 100 | 6020 |
| Zinc | | | | 25.0 | 24.9 | 100 | 25.0 | 100 | 6020 |

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | 25.0 | 26.1 | 104 | | | 6020 |
| Antimony | | | | 25.0 | 24.4 | 98 | | | 6020 |
| Arsenic | | | | 25.0 | 25.0 | 100 | | | 6020 |
| Barium | | | | 25.0 | 24.2 | 97 | | | 6020 |
| Beryllium | | | | 25.0 | 24.9 | 100 | | | 6020 |
| Cadmium | | | | 25.0 | 25.0 | 100 | | | 6020 |
| Calcium | | | | 2500 | 2451 | 98 | 2534 | 101 | 6010B |
| Calcium | | | | 25000 | 24837 | 99 | 24718 | 99 | 6010B |
| Chromium | | | | 25.0 | 25.1 | 100 | | | 6020 |
| Cobalt | | | | 25.0 | 25.3 | 101 | | | 6020 |
| Copper | | | | 25.0 | 25.1 | 100 | | | 6020 |
| Iron | | | | 500 | 494 | 99 | 489 | 98 | 6010B |
| Iron | | | | 25000 | 23725 | 95 | 23300 | 93 | 6010B |
| Lead | | | | 25.0 | 24.5 | 98 | | | 6020 |
| Magnesium | | | | 2000 | 1962 | 98 | 1935 | 97 | 6010B |
| Magnesium | | | | 25000 | 24908 | 100 | 24792 | 99 | 6010B |
| Manganese | | | | 25.0 | 25.1 | 100 | | | 6020 |
| Nickel | | | | 25.0 | 25.5 | 102 | | | 6020 |
| Potassium | | | | 10000 | 10090 | 101 | 9726 | 97 | 6010B |
| Silver | | | | 25.0 | 24.6 | 98 | | | 6020 |
| Sodium | | | | 10000 | 9796 | 98 | 9566 | 96 | 6010B |
| Thallium | | | | 25.0 | 25.0 | 100 | | | 6020 |
| Vanadium | | | | 25.0 | 25.3 | 101 | | | 6020 |
| Zinc | | | | 25.0 | 25.1 | 100 | | | 6020 |

# Metals
## - 2b -
## CRDL STANDARD FOR AA AND ICP

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Aluminum | | | | 2.0 | 2.0 | 100 | | |
| Antimony | | | | 0.05 | 0.06 | 120 | | |
| Arsenic | | | | 0.50 | 0.55 | 110 | | |
| Barium | | | | 0.05 | 0.05 | 100 | | |
| Beryllium | | | | 0.020 | 0.021 | 105 | | |
| Cadmium | | | | 0.020 | 0.022 | 110 | | |
| Calcium | | | | 50.00 | 37.79 | 76 | | |
| Chromium | | | | 0.20 | 0.19 | 95 | | |
| Cobalt | | | | 0.020 | 0.021 | 105 | | |
| Copper | | | | 0.10 | 0.12 | 120 | | |
| Iron | | | | 20.00 | 18.21 | 91 | | |
| Lead | | | | 0.020 | 0.023 | 115 | | |
| Magnesium | | | | 20.00 | 16.32 | 82 | | |
| Manganese | | | | 0.05 | 0.05 | 100 | | |
| Nickel | | | | 0.20 | 0.21 | 105 | | |
| Potassium | | | | 400.00 | 424.00 | 106 | | |
| Selenium | 0.50 | 0.53 | 106.0 | | | | | |
| Silver | | | | 0.020 | 0.019 | 95 | | |
| Sodium | | | | 200.00 | 189.68 | 95 | | |
| Thallium | | | | 0.020 | 0.019 | 95 | | |
| Titanium | | | | 10.0 | 10.4 | 104 | | |
| Vanadium | | | | 0.20 | 0.19 | 95 | | |
| Zinc | | | | 0.50 | 0.54 | 108 | | |

# Metals

- 3 -

## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

Concentration Units: ug/L

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.3 | U | 0.3 | U | 0.3 | U | 0.3 | U | 6020 |
| Antimony | 0.04 | J | 0.02 | U | 0.02 | U | 0.02 | J | 6020 |
| Arsenic | 0.07 | U | 0.07 | U | 0.07 | U | 0.07 | U | 6020 |
| Barium | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 6020 |
| Beryllium | 0.003 | U | 0.003 | U | 0.003 | U | 0.005 | J | 6020 |
| Cadmium | 0.003 | U | 0.003 | U | 0.003 | U | 0.003 | U | 6020 |
| Calcium | 6.0 | U | 6.0 | U | 6.0 | U | 6.0 | U | 6010B |
| Chromium | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 6020 |
| Cobalt | 0.003 | U | 0.003 | U | 0.003 | U | 0.003 | U | 6020 |
| Copper | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 6020 |
| Iron | 0.8 | J | -2.2 | J | 1.7 | J | 1.7 | J | 6010B |
| Lead | 0.005 | U | 0.005 | U | 0.005 | U | 0.005 | U | 6020 |
| Magnesium | 0.3 | U | 0.3 | U | 0.7 | J | 2.6 | J | 6010B |
| Manganese | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 6020 |
| Nickel | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U | 6020 |
| Potassium | 40 | U | 40 | U | 40 | U | 40 | U | 6010B |
| Selenium | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 7742 |
| Silver | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 6020 |
| Sodium | 20 | U | 20 | U | 20 | U | 25 | J | 6010B |
| Thallium | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | J | 6020 |
| Titanium | 0.4 | J | 0.4 | U | 0.4 | U | 0.4 | U | 6010B |
| Vanadium | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U | 6020 |
| Zinc | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U | 6020 |

# Metals



## BLANKS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | 0.3 | J | 0.3 | J | | | 6020 |
| Antimony | | | 0.02 | J | 0.02 | J | | | 6020 |
| Arsenic | | | 0.07 | U | 0.07 | U | | | 6020 |
| Barium | | | 0.02 | U | 0.02 | U | | | 6020 |
| Beryllium | | | 0.005 | J | 0.005 | J | | | 6020 |
| Cadmium | | | 0.006 | J | 0.004 | J | | | 6020 |
| Calcium | | | 6.0 | U | 6.0 | U | 6.0 | U | 6010B |
| Chromium | | | -0.05 | J | 0.04 | U | | | 6020 |
| Cobalt | | | 0.006 | J | 0.006 | J | | | 6020 |
| Copper | | | 0.02 | U | 0.02 | J | | | 6020 |
| Iron | | | 1.9 | J | 3.1 | J | 4.2 | J | 6010B |
| Lead | | | 0.007 | J | 0.009 | J | | | 6020 |
| Magnesium | | | 2.9 | J | 3.7 | J | 4.3 | J | 6010B |
| Manganese | | | 0.01 | J | 0.01 | J | | | 6020 |
| Nickel | | | 0.03 | U | 0.03 | U | | | 6020 |
| Potassium | | | 40 | U | 40 | U | 40 | U | 6010B |
| Silver | | | 0.006 | J | 0.006 | J | | | 6020 |
| Sodium | | | 20 | U | 20 | U | 20 | U | 6010B |
| Thallium | | | 0.007 | J | 0.008 | J | | | 6020 |
| Vanadium | | | 0.03 | U | 0.03 | U | | | 6020 |
| Zinc | | | 0.2 | U | 0.2 | U | | | 6020 |

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-AES-02 **ICS Source:** Inorganic Ventures

**Concentration Units:** ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Calcium | 500000 | 500000 | 495150 | 489821.2 | 98.0 | | | |
| Iron | 200000 | 200000 | 198014 | 195854.6 | 97.9 | | | |
| Magnesium | 500000 | 500000 | 509001 | 506301.4 | 101.3 | | | |
| Potassium | | | -33 | -41.2 | | | | |
| Sodium | | | 28 | 25.5 | | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Aluminum | | | 22430 | 22120 | | | | |
| Antimony | | | 0.08 | 0.04 | | | | |
| Arsenic | | 25 | 0.03 | 26.8 | 107 | | | |
| Barium | | | 0.34 | 0.3 | | | | |
| Beryllium | | | 0.04 | 0.01 | | | | |
| Cadmium | | 25 | 0.39 | 26.3 | 105 | | | |
| Chromium | | 50 | 0.73 | 54.0 | 108 | | | |
| Cobalt | | 50 | 0.91 | 54.2 | 108 | | | |
| Copper | | 50 | 0.99 | 49.9 | 100 | | | |
| Lead | | | 0.10 | 0.06 | | | | |
| Manganese | | 50 | 2.66 | 53.6 | 107 | | | |
| Nickel | | 50 | 2.36 | 52.7 | 105 | | | |
| Silver | 0.0 | 12.5 | 0.11 | 13.6 | 109 | | | |
| Thallium | | | 0.06 | 0.04 | | | | |
| Vanadium | | 50 | 0.08 | 54.5 | 109 | | | |
| Zinc | | 25 | 1.83 | 25.2 | 101 | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals



## ICP INTERFERENCE CHECK SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**ICP ID Number:** K-ICP-AES-03 **ICS Source:** Inorganic Ventures

**Concentration Units:** ug/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol.A | Sol.AB | Sol.A | Sol.AB | %R | Sol.A | Sol.AB | %R |
| Titanium | | | 5 | 5 | | | | |

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1 **Units:** UG/L

**Project Name:** Passaic RI/FS Sediment **Basis:** N/A

**Matrix:** WATER **% Solids:** 0.0

**Sample Name:** LPRC07C-RBS **Lab Code:** K1008857-003S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Titanium | 75 - 125 | 104 | | 0.4 | U | 100.00 | 104.0 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Windward Environmental, LLC

Service Request: K1008857

Project No.: Task 18.8.1

Units: UG/L

Project Name: Passaic RI/FS Sediment

Basis: N/A

Matrix: WATER

% Solids: 0.0

Sample Name: Batch QC1S

Lab Code: K1009089-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 67 - 128 | 14.7 | | 1.0 | J | 16.00 | 85.6 | | 7742 |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Windward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: UG/L
Project Name: Passaic RI/FS Sediment
Basis: N/A
Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC2S
Lab Code: K1009161-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 75 - 125 | 46400 | | 35700 | | 10000.00 | 107.0 | | 6010B |
| Iron | | 5560 | | 4590 | | 1000.00 | 97.0 | | 6010B |
| Magnesium | 75 - 125 | 23300 | | 12700 | | 10000.00 | 106.0 | | 6010B |
| Potassium | 75 - 125 | 11800 | | 926 | | 10000.00 | 108.7 | | 6010B |
| Sodium | 75 - 125 | 17900 | | 7130 | | 10000.00 | 107.7 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable

*Columbia Analytical Services*

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

Client: Windward Environmental, LLC

Service Request: K1008857

Project No.: Task 18.8.1

Units: UG/L

Project Name: Passaic RI/FS Sediment

Basis: N/A

Matrix: WATER

% Solids: 0.0

Sample Name: Batch QC3S

Lab Code: K1009702-003S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 56 - 143 | 19.9 | | 3.7 | | 20.00 | 81.0 | | 6020 |
| Antimony | 66 - 133 | 21.4 | | 0.11 | | 20.00 | 106.4 | | 6020 |
| Arsenic | 72 - 129 | 21.2 | | 0.56 | | 20.00 | 103.2 | | 6020 |
| Barium | | 176 | | 161 | | 20.00 | 75.0 | | 6020 |
| Beryllium | 73 - 125 | 18.3 | | 0.017 | J | 20.00 | 91.4 | | 6020 |
| Cadmium | 87 - 113 | 20.1 | | 0.008 | J | 20.00 | 100.5 | | 6020 |
| Chromium | 76 - 115 | 19.8 | | 0.18 | J | 20.00 | 98.1 | | 6020 |
| Cobalt | 84 - 115 | 20.7 | | 2.440 | | 20.00 | 91.3 | | 6020 |
| Copper | 74 - 114 | 18.7 | | 0.76 | | 20.00 | 89.7 | | 6020 |
| Lead | 76 - 117 | 18.2 | | 0.068 | | 20.00 | 90.7 | | 6020 |
| Manganese | | 862 | | 877 | | 20.00 | -75.0 | | 6020 |
| Nickel | 78 - 117 | 21.4 | | 3.26 | | 20.00 | 90.7 | | 6020 |
| Silver | 76 - 114 | 18.6 | | 0.006 | J | 20.00 | 93.0 | | 6020 |
| Thallium | 86 - 108 | 18.5 | | 0.016 | J | 20.00 | 92.4 | | 6020 |
| Vanadium | 82 - 119 | 20.5 | | 0.20 | J | 20.00 | 101.5 | | 6020 |
| Zinc | 65 - 126 | 22.3 | | 3.19 | | 20.00 | 95.6 | | 6020 |

An empty field in the Control Limit column indicates the control limit is not applicable

*Columbia Analytical Services*

# Metals

**- 5B -**

## POST SPIKE SAMPLE RECOVERY

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1 **Units:** UG/L

**Project Name:** Passaic RI/FS Sediment **Basis:** N/A

**Matrix:** WATER

**Sample Name:** LPRC07C-RBA **Lab Code:** K1008857-003A

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 75 - 125 | 21.7 | | 1.4 | J | 20 | 102 | | 6020 |
| Antimony | 75 - 125 | 20.51 | | 0.02 | U | 20 | 103 | | 6020 |
| Arsenic | 75 - 125 | 20.26 | | 0.07 | U | 20 | 101 | | 6020 |
| Barium | 75 - 125 | 20.25 | | 0.24 | | 20 | 100 | | 6020 |
| Beryllium | 75 - 125 | 21.070 | | 0.007 | J | 20 | 105 | | 6020 |
| Cadmium | 75 - 125 | 20.780 | | 0.015 | J | 20 | 104 | | 6020 |
| Chromium | 75 - 125 | 21.11 | | 0.17 | J | 20 | 105 | | 6020 |
| Cobalt | 75 - 125 | 21.040 | | 0.010 | J | 20 | 105 | | 6020 |
| Copper | 75 - 125 | 20.82 | | 0.08 | J | 20 | 104 | | 6020 |
| Lead | 75 - 125 | 20.190 | | 0.015 | J | 20 | 101 | | 6020 |
| Manganese | 75 - 125 | 20.84 | | 0.24 | | 20 | 103 | | 6020 |
| Nickel | 75 - 125 | 21.22 | | 0.08 | J | 20 | 106 | | 6020 |
| Silver | 75 - 125 | 19.560 | | 0.004 | U | 20 | 98 | | 6020 |
| Thallium | 75 - 125 | 20.090 | | 0.012 | J | 20 | 100 | | 6020 |
| Vanadium | 75 - 125 | 20.91 | | 0.03 | U | 20 | 105 | | 6020 |
| Zinc | 75 - 125 | 21.4 | | 1.0 | | 20 | 102 | | 6020 |

# Metals

- 6 -

## DUPLICATES

Client: Windward Environmental, LLC
Service Request: K1008857

Project No.: Task 18.8.1
Units: UG/L

Project Name: Passaic RI/FS Sediment
Basis: N/A

Matrix: WATER
% Solids: 0.0

Sample Name: LPRC07C-RBD
Lab Code: K1008857-003D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Titanium | | 0.4 | U | 0.4 | U | | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

Client: Windward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: UG/L
Project Name: Passaic RI/FS Sediment
Basis: N/A
Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC1D
Lab Code: K1009089-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Selenium | | 1.0 | J | 1.1 | | 9.5 | | 7742 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

Client: Windward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: UG/L
Project Name: Passaic RI/FS Sediment
Basis: N/A
Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC2D
Lab Code: K1009161-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Calcium | 20 | 35700 | | 35500 | | 0.6 | | 6010B |
| Iron | 20 | 4590 | | 4530 | | 1.3 | | 6010B |
| Magnesium | 20 | 12700 | | 12600 | | 0.8 | | 6010B |
| Potassium | | 926 | | 928 | | 0.2 | | 6010B |
| Sodium | 20 | 7130 | | 7010 | | 1.7 | | 6010B |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

Client: Windward Environmental, LLC
Service Request: K1008857
Project No.: Task 18.8.1
Units: UG/L
Project Name: Passaic RI/FS Sediment
Basis: N/A
Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC3D
Lab Code: K1009702-003D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 3.7 | | 3.1 | | 17.6 | | 6020 |
| Antimony | | 0.11 | | 0.10 | | 9.5 | | 6020 |
| Arsenic | | 0.56 | | 0.61 | | 8.5 | | 6020 |
| Barium | 20 | 161 | | 160 | | 0.6 | | 6020 |
| Beryllium | | 0.017 | J | 0.018 | J | 5.7 | | 6020 |
| Cadmium | | 0.008 | J | 0.006 | J | 28.6 | | 6020 |
| Chromium | | 0.18 | J | 0.21 | | 15.4 | | 6020 |
| Cobalt | 20 | 2.440 | | 2.460 | | 0.8 | | 6020 |
| Copper | 20 | 0.76 | | 0.76 | | 0.0 | | 6020 |
| Lead | | 0.068 | | 0.068 | | 0.0 | | 6020 |
| Manganese | 20 | 877 | | 872 | | 0.6 | | 6020 |
| Nickel | 20 | 3.26 | | 3.27 | | 0.3 | | 6020 |
| Silver | | 0.006 | J | 0.004 | J | 40.0 | | 6020 |
| Thallium | | 0.016 | J | 0.016 | J | 0.0 | | 6020 |
| Vanadium | | 0.20 | J | 0.20 | | 0.0 | | 6020 |
| Zinc | 20 | 3.19 | | 3.18 | | 0.3 | | 6020 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals



## LABORATORY CONTROL SAMPLE

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Aqueous LCS Source:** CAS MIXED **Solid LCS Source:**

| Analyte | Aqueous: ug/L | | | Solid: mg/kg | | | | |
|---|---|---|---|---|---|---|---|---|
| | True | Found | %R | True | Found | C | Limits | %R |
| Aluminum | 20 | 21.3 | 106.5 | | | | | |
| Antimony | 20 | 21.7 | 108.5 | | | | | |
| Arsenic | 20 | 20.9 | 104.5 | | | | | |
| Barium | 20 | 20.2 | 101.0 | | | | | |
| Beryllium | 20 | 20.1 | 100.5 | | | | | |
| Cadmium | 20 | 21.0 | 105.0 | | | | | |
| Calcium | 12500 | 12500 | 100.0 | | | | | |
| Chromium | 20 | 20.6 | 103.0 | | | | | |
| Cobalt | 20 | 20.2 | 101.0 | | | | | |
| Copper | 20 | 20.3 | 101.5 | | | | | |
| Iron | 2500 | 2350 | 94.0 | | | | | |
| Lead | 20 | 20.3 | 101.5 | | | | | |
| Magnesium | 12500 | 12600 | 100.8 | | | | | |
| Manganese | 20 | 20.7 | 103.5 | | | | | |
| Nickel | 20 | 20.7 | 103.5 | | | | | |
| Potassium | 12500 | 12900 | 103.2 | | | | | |
| Selenium | 10 | 9.4 | 94.0 | | | | | |
| Silver | 20 | 19.6 | 98.0 | | | | | |
| Sodium | 12500 | 12500 | 100.0 | | | | | |
| Thallium | 20 | 20.3 | 101.5 | | | | | |
| Titanium | 100 | 101 | 101.0 | | | | | |
| Vanadium | 20 | 20.6 | 103.0 | | | | | |
| Zinc | 20 | 22.0 | 110.0 | | | | | |

# Metals

- 9 -

## ICP SERIAL DILUTIONS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1  Units: UG/L

Project Name: Passaic RI/FS Sediment

Sample Name: LPRC07C-RBL  Lab Code: K1008857-003L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 1.4 | J | 2.1 | J | 50 | | MS |
| Antimony | 0.020 | U | 0.100 | U | | | MS |
| Arsenic | 0.07 | U | 0.35 | U | | | MS |
| Barium | 0.24 | | 0.31 | | 29 | | MS |
| Beryllium | 0.007 | J | 0.017 | J | 143 | | MS |
| Cadmium | 0.015 | J | 0.034 | J | 127 | | MS |
| Calcium | 8.69 | J | 30.00 | U | 100.0 | | P |
| Chromium | 0.17 | J | 0.20 | U | 100.0 | | MS |
| Cobalt | 0.010 | J | 0.017 | J | 70 | | MS |
| Copper | 0.08 | J | 0.11 | J | 38 | | MS |
| Iron | 0.80 | U | 4.00 | U | | | P |
| Lead | 0.015 | J | 0.030 | J | 100 | | MS |
| Magnesium | 0.84 | J | 1.50 | U | 100.0 | | P |
| Manganese | 0.24 | | 0.48 | | 100 | | MS |
| Nickel | 0.08 | J | 0.15 | U | 100.0 | | MS |
| Potassium | 40 | U | 200 | U | | | P |
| Silver | 0.004 | U | 0.020 | U | | | MS |
| Sodium | 42.29 | J | 100.00 | U | 100.0 | | P |
| Thallium | 0.012 | J | 0.030 | J | 150 | | MS |
| Titanium | 0.4 | U | 2.0 | U | | | P |
| Vanadium | 0.03 | U | 0.15 | U | | | MS |
| Zinc | 1.0 | | 1.2 | J | 20 | | MS |

# Metals

- 10 -

## DETECTION LIMITS

Client: Windward Environmental, LLC Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP/ICP-MS ID #:

GFAA ID #: K-FLAA-02 AA ID #:

| Analyte | Wave-length (nm) | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Selenium | 196.0 | | 0.50 | 0.10 | H |

Comments:

# Metals

- 10 -

## DETECTION LIMITS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #:  AA ID #:

| Analyte | Wave-length (nm) | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Calcium | 211.2 | | 50 | 6.0 | P |
| Iron | 259.90 | | 20 | 0.8 | P |
| Magnesium | 202.5 | | 20 | 0.3 | P |
| Potassium | 766.49 | | 400 | 40.0 | P |
| Sodium | 589.5 | | 100 | 20.0 | P |

Comments:

# Metals

- 10 -

## DETECTION LIMITS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP/ICP-MS ID #:

GFAA ID #:  AA ID #:

| Analyte | Wave-length (nm) | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Titanium | 336.1 | | 10.0 | 0.4 | P |

Comments:

# Metals

- 10 -

## DETECTION LIMITS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #:  AA ID #:

| Analyte | Isotope | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Aluminum | 27 | | 2.0 | 0.3 | MS |
| Antimony | 121 | | 0.05 | 0.02 | MS |
| Arsenic | 75 | | 0.5 | 0.07 | MS |
| Barium | 137 | | 0.05 | 0.02 | MS |
| Beryllium | 9 | | 0.02 | 0.003 | MS |
| Cadmium | 111 | | 0.02 | 0.003 | MS |
| Chromium | 52 | | 0.2 | 0.04 | MS |
| Cobalt | 59 | | 0.02 | 0.003 | MS |
| Copper | 65 | | 0.1 | 0.02 | MS |
| Lead | 208 | | 0.02 | 0.005 | MS |
| Manganese | 55 | | 0.05 | 0.01 | MS |
| Nickel | 60 | | 0.2 | 0.03 | MS |
| Silver | 107 | | 0.02 | 0.004 | MS |
| Thallium | 205 | | 0.02 | 0.002 | MS |
| Vanadium | 51 | | 0.2 | 0.03 | MS |
| Zinc | 66 | | 0.5 | 0.20 | MS |

Comments:

*Columbia Analytical Services*

# Metals

## - 11A -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-02

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Al | Ca | Fe | Mg | As |
|---|---|---|---|---|---|---|
| Aluminum | 308.215 | 0.0000000 | 0.0000000 | -0.0004100 | 0.0000000 | 0.0000000 |
| Antimony | 206.838 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0000000 | 0.0000000 | -0.0001100 | -0.0000900 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 313.042 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0005800 | 0.0000000 | 0.0000000 |
| Cadmium | 228.802 | 0.0000000 | 0.0000000 | 0.0000900 | 0.0000000 | 0.0000000 |
| Calcium | 211.2 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000200 | 0.0000000 | 0.0000000 |
| Copper | 324.754 | 0.0000000 | 0.0000000 | -0.0000200 | 0.0000000 | 0.0000000 |
| Iron | 271.4 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0001200 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 202.5 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 293.9 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | -0.0000100 | 0.0000000 | -0.0000100 | -0.0000100 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | -0.0000700 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.9 | -0.0002000 | 0.0000000 | 0.0004400 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.026 | -0.0000600 | 0.0000000 | -0.0000600 | 0.0000000 | 0.0000000 |
| Silicon | 228.158 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 588.995 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 421.552 | 0.0000000 | 0.0001100 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.864 | 0.0000000 | 0.0000000 | -0.0001900 | -0.0000900 | 0.0000000 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | -0.0000400 | 0.0000000 | 0.0000000 |
| Titanium | 334.941 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | -0.0000100 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

Comments:

*Columbia Analytical Services*

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-02

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Co | Cr | Cu | Mn | Mo |
|---|---|---|---|---|---|---|
| Aluminum | 308.215 | -0.0052000 | -0.0034300 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.838 | 0.0002400 | 0.0080100 | 0.0000000 | -0.0001500 | -0.0184200 |
| Arsenic | 189.042 | 0.0000000 | 0.0004000 | 0.0000000 | 0.0000000 | 0.0005700 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0000800 |
| Beryllium | 313.042 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Boron | 249.678 | 0.0000000 | -0.0001000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 228.802 | -0.0000500 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Calcium | 211.2 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0006000 |
| Copper | 324.754 | 0.0000000 | -0.0000500 | 0.0000000 | 0.0000000 | 0.0002700 |
| Iron | 271.4 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0003800 | -0.0002100 | 0.0000000 | 0.0000000 | -0.0016500 |
| Magnesium | 202.5 | 0.3183600 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 293.9 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | -0.0001200 | 0.0000000 | 0.0000000 | -0.0000900 | 0.0000000 |
| Nickel | 231.604 | 0.0000700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.9 | 0.0000000 | 0.0010100 | -0.0810500 | 0.0000000 | 0.0038000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.026 | -0.0003600 | -0.0003700 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silicon | 228.158 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0026300 | 0.0090100 |
| Silver | 328.068 | 0.0000000 | 0.0000800 | 0.0000000 | 0.0000000 | -0.0005600 |
| Sodium | 588.995 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 421.552 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.864 | 0.0073700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Tin | 189.989 | -0.0002500 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 334.941 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | -0.0000900 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | -0.0012600 | 0.0000000 | 0.0000000 | -0.0001000 |

Comments:

*Columbia Analytical Services*

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-02

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Ni | P | Ti | V |
|---|---|---|---|---|---|
| Aluminum | 308.215 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.838 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0014400 |
| Beryllium | 313.042 | 0.0000000 | 0.0000000 | -0.0000200 | 0.0016600 |
| Boron | 249.678 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 228.802 | -0.0000900 | 0.0000000 | 0.0000500 | 0.0000000 |
| Calcium | 211.2 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000200 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0001300 | 0.0000000 | 0.0012500 | 0.0000000 |
| Copper | 324.754 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0008400 |
| Iron | 271.4 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0315100 |
| Lead | 220.353 | 0.0003800 | 0.0000000 | -0.0006200 | 0.0000000 |
| Magnesium | 202.5 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 293.9 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | -0.0000500 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.9 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0020400 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.026 | -0.0007900 | 0.0000000 | 0.0000000 | 0.0004900 |
| Silicon | 228.158 | 0.0000000 | 0.0000000 | 0.0753200 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0007300 | 0.0000000 |
| Sodium | 588.995 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 421.552 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.864 | 0.0000000 | 0.0000000 | -0.0015400 | 0.0000000 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | -0.0015800 | 0.0000000 |
| Titanium | 334.941 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

Comments:

*Columbia Analytical Services*

# Metals

## - 11A -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Al | Ca | Fe | Mg | Co |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000880 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000290 | 0.0000000 | -0.0001420 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0000220 | 0.0000000 | -0.0000580 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000100 | 0.0000000 | 0.0000000 |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0002330 | 0.0000000 | 0.0016240 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000590 | 0.0000000 | 0.0000150 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000230 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | -0.0000030 | 0.0000000 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000000 | 0.0001620 | 0.0000000 | 0.0006220 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0000940 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000130 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001940 |
| Phosphorus | 214.914 | -0.0005540 | 0.0000000 | 0.0006550 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | -0.0001120 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0014540 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000210 | 0.0000000 | 0.0000000 | 0.0000320 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | -0.0000020 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | 0.0001010 | 0.0000000 | 0.0000000 |

Comments:

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Cr | Mn | Mo | Ni | P |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0004350 | 0.0003100 | 0.0000000 |
| Antimony | 206.833 | 0.0173600 | -0.0001330 | 0.0011910 | 0.0000000 | 0.0000000 |
| Arsenic | 189.042 | 0.0003470 | -0.0001550 | 0.0005480 | 0.0000000 | 0.0000000 |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | -0.0000300 | -0.0001890 | -0.0000190 | 0.0000000 |
| Boron | 249.678 | 0.0004530 | 0.0000000 | -0.0008670 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000410 | 0.0000000 | -0.0000280 | -0.0000170 | 0.0000000 |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0001390 | 0.0000680 | 0.0000000 | 0.0000280 |
| Cobalt | 230.786 | -0.0000120 | 0.0000380 | 0.0011280 | -0.0001970 | 0.0000000 |
| Copper | 224.7 | 0.0000000 | 0.0000240 | 0.0025520 | -0.0024670 | 0.0000000 |
| Iron | 259.94 | 0.0000000 | 0.0000000 | -0.0002400 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | 0.0001340 | -0.0010800 | 0.0001780 | 0.0000000 |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 285.213 | -0.0014420 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.61 | -0.0000110 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Molybdenum | 202.03 | 0.0000000 | -0.0000270 | 0.0000000 | -0.0000310 | 0.0000000 |
| Nickel | 231.604 | -0.0000240 | 0.0000000 | -0.0000480 | 0.0000000 | 0.0000000 |
| Phosphorus | 214.914 | 0.0000000 | -0.0004110 | 0.0085820 | 0.0000000 | 0.0000000 |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.0 | 0.0000000 | 0.0006630 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0192220 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000390 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Strontium | 407.771 | 0.0000080 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0002570 | 0.0008680 | 0.0000000 | 0.0000000 | 0.0000000 |
| Tin | 189.989 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000410 | 0.0001300 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | -0.0027450 | -0.0002030 | 0.0000000 | 0.0000000 |
| Zinc | 213.856 | 0.0000000 | 0.0000000 | -0.0001050 | 0.0057510 | 0.0000000 |

Comments:

*Columbia Analytical Services*

# Metals

## - 11B -

## ICP INTERELEMENT CORRECTION FACTORS

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Si | Ti | V | | |
|---|---|---|---|---|---|---|
| Aluminum | 394.401 | 0.0000000 | 0.0000000 | 0.0005300 | | |
| Antimony | 206.833 | -0.0000210 | 0.0004780 | 0.0000000 | | |
| Arsenic | 189.042 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Barium | 455.403 | 0.0000000 | 0.0000000 | 0.0000280 | | |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Boron | 249.678 | 0.0000000 | 0.0000000 | -0.0001270 | | |
| Cadmium | 226.502 | -0.0000020 | 0.0000000 | 0.0000000 | | |
| Calcium | 393.366 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Chromium | 267.716 | 0.0000000 | 0.0000590 | -0.0000760 | | |
| Cobalt | 230.786 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Copper | 224.7 | -0.0000060 | 0.0004820 | -0.0000300 | | |
| Iron | 259.94 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Lead | 220.353 | 0.0002440 | 0.0000000 | 0.0000000 | | |
| Lithium | 670.784 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Magnesium | 285.213 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Manganese | 257.61 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Molybdenum | 202.03 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Phosphorus | 214.914 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Potassium | 766.491 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Selenium | 196.0 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silicon | 251.611 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Silver | 328.068 | 0.0000000 | -0.0000780 | 0.0000910 | | |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Strontium | 407.771 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Thallium | 190.856 | 0.0000000 | -0.0008960 | -0.0007350 | | |
| Tin | 189.989 | 0.0000000 | -0.0007490 | 0.0000000 | | |
| Titanium | 336.121 | 0.0000000 | 0.0000000 | 0.0000000 | | |
| Vanadium | 292.402 | 0.0000000 | 0.0009490 | 0.0000000 | | |
| Zinc | 213.856 | 0.0000000 | -0.0003230 | 0.0000000 | | |

Comments:

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-02

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Calcium | 5.000 | 1800000 | 6010B |
| Iron | 5.000 | 900000 | 6010B |
| Magnesium | 5.000 | 900000 | 6010B |
| Potassium | 5.000 | 450000 | 6010B |
| Sodium | 5.000 | 180000 | 6010B |

Comments:

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

Client: Windward Environmental, LLC  Service Request: K1008857

Project No.: Task 18.8.1

Project Name: Passaic RI/FS Sediment

ICP ID Number: K-ICP-AES-03

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Titanium | 15.000 | 22500 | 6010B |

Comments:

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

ICP ID Number: K-ICP-MS-02

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Aluminum | 15.000 | 450 | 6020 |
| Antimony | 15.000 | 900 | 6020 |
| Arsenic | 15.000 | 900 | 6020 |
| Barium | 15.000 | 900 | 6020 |
| Beryllium | 15.000 | 450 | 6020 |
| Cadmium | 15.000 | 900 | 6020 |
| Chromium | 15.000 | 900 | 6020 |
| Cobalt | 15.000 | 900 | 6020 |
| Copper | 15.000 | 900 | 6020 |
| Lead | 15.000 | 900 | 6020 |
| Manganese | 15.000 | 900 | 6020 |
| Nickel | 15.000 | 900 | 6020 |
| Silver | 15.000 | 270 | 6020 |
| Thallium | 15.000 | 450 | 6020 |
| Vanadium | 15.000 | 900 | 6020 |
| Zinc | 15.000 | 900 | 6020 |

Comments:

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** F

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K1008857-003 | 09/01/10 | 50.0 | 50.0 |
| K1008857-MB | 09/01/10 | 50.0 | 50.0 |
| K1009089-001D | 09/01/10 | 50.0 | 50.0 |
| K1009089-001S | 09/01/10 | 50.0 | 50.0 |
| LCSW | 09/01/10 | 50.0 | 50.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** P

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K1008857-003 | 09/20/10 | 50.0 | 50.0 |
| K1008857-MB | 09/20/10 | 50.0 | 50.0 |
| K1009161-001D | 09/20/10 | 50.0 | 50.0 |
| K1009161-001S | 09/20/10 | 50.0 | 50.0 |
| LCSW | 09/20/10 | 50.0 | 50.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** P

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K1008857-003 | 09/23/10 | 50.0 | 50.0 |
| K1008857-003D | 09/23/10 | 50.0 | 50.0 |
| K1008857-003S | 09/23/10 | 50.0 | 50.0 |
| K1008857-MB | 09/23/10 | 50.0 | 50.0 |
| LCSW | 09/23/10 | 50.0 | 50.0 |

# Metals
-13-
## PREPARATION LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Method:** MS

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K1008857-003 | 09/20/10 | 50.0 | 50.0 |
| K1008857-MB | 09/20/10 | 50.0 | 50.0 |
| K1009702-003D | 09/20/10 | 50.0 | 50.0 |
| K1009702-003S | 09/20/10 | 50.0 | 50.0 |

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/08/10 **End Date:** 09/08/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CAL BLK | 1 | 13:43 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 0.5 | 1 | 13:45 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 1.0 | 1 | 13:48 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 5.0 | 1 | 13:50 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 7.5 | 1 | 13:52 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| STD 10.0 | 1 | 13:55 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ICV1 | 1 | 13:57 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ICB1 | 1 | 14:00 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CRA | 1 | 14:02 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCV1 | 1 | 14:04 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB1 | 1 | 14:07 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| K1008857-MB | 2 | 14:09 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| LCSW | 2 | 14:12 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:21 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 2 | 14:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-003 | 2 | 14:26 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 2 | 14:28 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1009089-001D | 2 | 14:31 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCV2 | 1 | 14:33 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB2 | 1 | 14:36 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| K1009089-001S | 2 | 14:38 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| ZZZZZZ | 1 | 14:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:43 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:45 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:57 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-FLAA-02 **Method:** H

**Start Date:** 09/08/10 **End Date:** 09/08/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 1 | 14:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 15:02 | | | | | | | | | | | | | | | | | | | X | | | | | | |
| CCB3 | 1 | 15:04 | | | | | | | | | | | | | | | | | | | X | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-02 **Method:** P

**Start Date:** 09/21/10 **End Date:** 09/21/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Blank | 1 | 08:55 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| STDB | 1 | 08:58 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| STDA | 1 | 09:01 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| ICV1 | 1 | 09:05 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ICV1 | 1 | 09:08 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| ICB1 | 1 | 09:11 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV1 | 1 | 09:15 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV1 | 1 | 09:20 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| CCB1 | 1 | 09:25 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CRDL1 | 1 | 09:28 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ICS-A1 | 1 | 09:31 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ICS-AB1 | 1 | 09:34 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 09:37 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 09:40 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV2 | 1 | 09:43 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| CCB2 | 1 | 09:46 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 09:49 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:53 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 5 | 10:02 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:05 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:08 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1 | 10:20 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV3 | 1 | 10:23 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| CCB3 | 1 | 10:26 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 10:32 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-02 **Method:** P

**Start Date:** 09/21/10 **End Date:** 09/21/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 1 | 10:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:50 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:53 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV4 | 1 | 11:02 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV4 | 1 | 11:05 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| CCB4 | 1 | 11:08 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 11:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:21 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 1 | 11:27 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| LCSW | 1 | 11:30 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 11:33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1009161-001D | 1 | 11:36 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| K1009161-001S | 1 | 11:39 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV5 | 1 | 11:42 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV5 | 1 | 11:45 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| CCB5 | 1 | 11:47 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 11:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-003 | 1 | 12:06 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| K1008857-003L | 5 | 12:09 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| ZZZZZZ | 1 | 12:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:15 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-02 **Method:** P

**Start Date:** 09/21/10 **End Date:** 09/21/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| ZZZZZZ | 1 | 12:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV6 | 1 | 12:21 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |
| CCV6 | 1 | 12:24 | | | | | | | | X | | | | X | | X | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:27 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB6 | 1 | 12:30 | | | | | | | | X | | | | X | | X | | | | X | | | X | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P
**Start Date:** 09/27/10 **End Date:** 09/27/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B | AU | LI | MO | OS | PD | P | PT | SI | S | SN | SR | TI | U | | | | | | | | | | |
| BLK | 1.00 | 09:53 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| STD A | 1.00 | 09:56 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| STD B | 1.00 | 09:59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV1 | 1.00 | 10:02 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 10:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICB1 | 1.00 | 10:10 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV1 | 1.00 | 10:14 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 10:20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB1 | 1.00 | 10:27 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CRDL1 | 1.00 | 10:31 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 10:34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICSA | 1.00 | 10:36 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ICSAB | 1.00 | 10:40 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 10:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1008857-MB | 1.00 | 10:47 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| LCSW | 1.00 | 10:50 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-003 | 1.00 | 10:53 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-003D | 1.00 | 10:56 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-003L | 5.00 | 10:59 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV2 | 1.00 | 11:02 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:05 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCB2 | 1.00 | 11:09 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| K1008857-003S | 1.00 | 11:12 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:23 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:26 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV3 | 1.00 | 11:42 | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 11:45 | | | | | | | | | | | | | | | | | | | | | | | | | |

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-AES-03 **Method:** P
**Start Date:** 09/27/10 **End Date:** 09/27/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B | AU | LI | MO | OS | PD | P | PT | SI | S | SN | SR | TI | U | | | | | | | | | | |
| CCB3 | 1.00 | 11:49 | | | | | | | | | | | | | | X | | | | | | | | | | | |

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 09/22/10 **End Date:** 09/22/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal. Blk | 1 | 08:30 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| Cal. Stn | 1 | 08:34 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ICV1 | 1 | 08:39 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCV1 | 1 | 08:43 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ICB1 | 1 | 08:54 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCB1 | 1 | 08:59 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CRDL1 | 1 | 09:03 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ICS-A1 | 1 | 09:09 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ICS-AB1 | 1 | 09:14 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCV2 | 1 | 09:21 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCB2 | 1 | 09:33 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ZZZZZZ | 1 | 09:37 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:41 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 09:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 5 | 09:55 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CRDL2 | 1 | 10:20 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCV3 | 1 | 10:26 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCB3 | 1 | 10:38 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ZZZZZZ | 1 | 10:42 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 10:56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 11:16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| LCSW | 1 | 11:21 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCV4 | 1 | 11:25 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*Columbia Analytical Services*

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** Windward Environmental, LLC **Service Request:** K1008857

**Project No.:** Task 18.8.1

**Project Name:** Passaic RI/FS Sediment

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 09/22/10 **End Date:** 09/22/10

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CCB4 | 1 | 11:37 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| K1008857-MB | 1 | 11:41 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ZZZZZZ | 1 | 11:56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1009702-003D | 1 | 12:00 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| ZZZZZZ | 1 | 12:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 12:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1009702-003S | 1 | 12:15 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| K1008857-003 | 1 | 12:55 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| K1008857-003L | 5 | 13:07 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| K1008857-003A | 1 | 13:12 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCV5 | 1 | 13:16 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |
| CCB5 | 1 | 13:26 | | X | X | X | X | X | X | | X | X | X | | X | | X | | X | | | X | | X | X | X | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 119689
**Team**: Metals
**Analyst**: Matt Christian

**Prep Workflow**: MetDigAqMS
**Prep Method**: EPA CLP-METALS ILM04.0
**Rush/NPDES**: NPDES

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 09/20/2010 16:00
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | TestNo List | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009950-01 | Method Blank | | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| KQ1009950-02 | Lab Control Sample | | 50 mL | 50 mL | 1 mL<br>1 mL | 19309<br>20439 | Metals T | 1% "Ultrex" HNO3 |
| K1008857-003 | LPRC07C-RB | .02 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009161-001 | 08JD04 | .03 | 50 mL | 50 mL | | | Metals D | 1% "Ultrex" HNO3 |
| K1009161-001 | 08JD04 | .02 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009161-002 | 07JD12 | .03 | 50 mL | 50 mL | | | Metals D | 1% "Ultrex" HNO3 |
| K1009161-002 | 07JD12 | .02 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009161-002: KQ1009950-05 | Duplicate | .02 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009161-002: KQ1009950-06 | Matrix Spike | .02 | 50 mL | 50 mL | 1 mL<br>1 mL | 19309<br>20439 | Metals T | 1% "Ultrex" HNO3 |
| K1009161-003 | 07JD12 Dup | .03 | 50 mL | 50 mL | | | Metals D | 1% "Ultrex" HNO3 |
| K1009161-003 | 07JD12 Dup | .02 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009702-003 | TW 0259 | .11 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009702-003: KQ1009950-03 | Duplicate | .11 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009702-003: KQ1009950-04 | Matrix Spike | .11 | 50 mL | 50 mL | 1 mL<br>1 mL | 19309<br>20439 | Metals T | 1% "Ultrex" HNO3 |
| K1009856-001 | BF-IN | .06 | 50 mL | 50 mL | | | Metals D | 1% "Ultrex" HNO3 |
| K1009856-001 | BF-IN | .05 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |
| K1009856-002 | BF-EFF | .06 | 50 mL | 50 mL | | | Metals D | 1% "Ultrex" HNO3 |
| K1009856-002 | BF-EFF | .05 | 50 mL | 50 mL | | | Metals T | 1% "Ultrex" HNO3 |

13 Total Samples consisting of 7 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| K-MET 200.8 1000ug/L Stock | Spike | 19309 | 1/5/2011 | K-MET Ag 1000 ppb Stock | Spike | 20439 | 2/13/2011 |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Digestion | K-MET 50ml Centrifuge Tube | 16850 | Digestion | K-MET HNO3 ULTREX | 19688 |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | | Step | Name | Property | Value | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-BlockDigester-05 | Temperature | 95 | deg C | Digestion | K-BlockDigester-06 | Temperature | 95 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 20-SEP-10 16:00 | 20-SEP-10 18:00 | Matt Christian | | N | |

## Comments

## Review

Reviewed by: _____ Date: 9/21/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 118522
**Team**: Metals
**Analyst**: Matt Kuhn
**Prep Workflow**: MetDig3010A
**Prep Method**: EPA 3010A
**Rush/NPDES**: NPDES
**Status**: Prepped
**Current Step**: Digestion
**Prep Date**: 09/01/2010 09:30
**Due Date**: 07/31/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | TestNo List | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009129-03 | Method Blank | | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| KQ1009129-04 | Lab Control Sample | | 50 mL | 50 mL | 0.2 mL | 18987 | Se T | 6%HNO3 5%HCl |
| K1007139-001 | SM0710-TPSP3-VG-301 | .01 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| K1007139-008 | SM0710-TPSP5-VG-301 | .01 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| K1007273-020 | LPR-071310-RB | .01 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| K1007457-001 | LPR-071910-RB | .01 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| K1008857-003 | LPRC07C-RB | .02 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |
| K1009089-001 | Urds Discharge | .02 | 50 mL | 50 mL | | | Se D | 6%HNO3 5%HCl |
| K1009089-001: KQ1009129-01 | Duplicate | .02 | 50 mL | 50 mL | | | Se D | 6%HNO3 5%HCl |
| K1009089-001: KQ1009129-02 | Matrix Spike | .02 | 50 mL | 50 mL | 0.2 mL | 16643 | Se D | 6%HNO3 5%HCl |
| K1009225-014 | SML-082510-11 | .06 | 50 mL | 50 mL | | | Se T | 6%HNO3 5%HCl |

11 Total Samples consisting of 7 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| K-MET GFLCSW | Spike | 18987 | 10/1/2010 | K-MET SS2 | Spike | 16643 | 10/1/2010 |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|
| Digestion | K-MET 50ml Centrifuge Tube | 16850 | Digestion | K-MET HNO3 | 18888 |
| Digestion | K-MET HCL | 18676 | | | |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | | Step | Name | Property | Value | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-HotPlate-01 | Temperature | 95 | deg C | Digestion | K-HotPlate-02 | Temperature | 95 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 01-SEP-10 09:30 | 01-SEP-10 14:30 | Matt Kuhn | | N | |

## Comments

**Review**

Reviewed by: _____ Date: 5/2/10

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | 0.20 |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |
| **K-MET GFLCSW** | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | 0.20 |
| | Cu | 2.5 | 1000ml | 2.5 | |
| **K-MET QCP-CICV-1** | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| **K-MET QCP-CICV-2** | Sb | no dilution | - | 500 | |
| **K-MET QCP-CICV-3** | As, Pb, Se, Tl | no dilution | - | 500 | |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 119698
**Team**: Metals
**Analyst**: Matt Christian

**Prep Workflow**: MetDigAqICP
**Prep Method**: EPA CLP-METALS ILM04.0
**Rush/NPDES**: N/A

**Status**: Prepped
**Current Step**: Digestion

**Prep Date**: 09/20/2010 16:00
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | Final Volume | Spike Amt | Spike ID | TestNo List | Comments |
|---|---|---|---|---|---|---|---|---|
| KQ1009958-01 | Method Blank | | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| KQ1009958-02 | Lab Control Sample | | 50 mL | 50 mL | 0.5 mL<br>0.5 mL<br>0.5 mL<br>0.5 mL | 20873<br>20981<br>20982<br>21052 | Metals T | 1% HNO3, 5% HCl |
| K1008857-003 | LPRC07C-RB | .02 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009161-001 | 08JD04 | .03 | 50 mL | 50 mL | | | Metals D | 1% HNO3, 5% HCl |
| K1009161-001 | 08JD04 | .02 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009161-001: KQ1009958-03 | Duplicate | .03 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009161-001: KQ1009958-04 | Matrix Spike | .03 | 50 mL | 50 mL | 0.5 mL<br>0.5 mL<br>0.5 mL<br>0.5 mL | 20873<br>20981<br>20982<br>21052 | Metals T | 1% HNO3, 5% HCl |
| K1009161-002 | 07JD12 | .03 | 50 mL | 50 mL | | | Metals D | 1% HNO3, 5% HCl |
| K1009161-002 | 07JD12 | .02 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009161-003 | 07JD12 Dup | .03 | 50 mL | 50 mL | | | Metals D | 1% HNO3, 5% HCl |
| K1009161-003 | 07JD12 Dup | .02 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009645-001 | SW-1 | .03 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |
| K1009645-002 | SW-2 | .03 | 50 mL | 50 mL | | | Metals T | 1% HNO3, 5% HCl |

10 Total Samples consisting of 6 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

| Name | Type | ID | Expires | Name | Type | ID | Expires |
|---|---|---|---|---|---|---|---|
| K-MET SS1 | Spike | 20982 | 9/30/2010 | K-MET SS4 | Spike | 20873 | 12/16/2010 |
| K-MET SS3 | Spike | 21052 | 12/31/2010 | K-MET SS5 | Spike | 20981 | 2/25/2011 |

## Preparation Materials

| Step | Name | ID | Step | Name | ID |
|---|---|---|---|---|---|
| Digestion | K-MET 50ml Centrifuge Tube | 16850 | Digestion | K-MET HNO3 | 18888 |
| Digestion | K-MET HCL | 18676 | | | |

## Preparation Hardware / Equipment

| Step | Name | Property | Value | Step | Name | Property | Value |
|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Digestion | K-BlockDigester-05 | Temperature | 95 | deg C | Digestion | K-BlockDigester-06 | Temperature | 95 | deg C |

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Digestion | 20-SEP-10 16:00 | 20-SEP-10 18:00 | Matt Christian | | N | |

## Comments

## Review

Reviewed by: _____ Date: 9/21/10

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | 0.5 |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | 0.5 |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | 0.5 |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | 0.5 |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |
| **K-MET GFLCSW** | HNO3 | 10.0 | 1000ml | - | |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| **K-MET QCP-CICV-1** | Ca, Mg, Na, K | no dilution | - | 2500 | 0.25 |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| **K-MET QCP-CICV-2** | Sb | no dilution | - | 500 | 0.25 |
| **K-MET QCP-CICV-3** | As, Pb, Se, Tl | no dilution | - | 500 | 0.25 |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s) :
Star Lims Run No.: 119698 K1008857 Ti only

Method : CLP
3005A (CLP Hot Block) Other- _____

Analysis for : (ICP) ICP-MS GFAA
Flame AA Other _____

| Sample | Initial Weight (g) | Dry | Wet | Initial Volume(ml) | Final Volume (ml) | Matrix |
|---|---|---|---|---|---|---|
| Blank | | | X | 50 | 50 | 1% $HNO_3$, 5% HCl |
| LCS | | | ↓ | ↓ | ↓ | ↓ |
| 8857 -3 | | | ↓ | ↓ | ↓ | ↓ |
| -3D | | | ↓ | ↓ | ↓ | ↓ |
| -3S | | | ↓ | ↓ | ↓ | ↓ |

MC 9/10

**Time Digestion Started:** _____ **Balance I.D.:** _____ **Date Balance Checked** _____
**Lot # Acids Used: HNO3** J100238 **HCl** 201019001 **$H_2O_2$** 50095020 **HF** _____
**Hot Block Temp:** 95°C
**LCSS (circle appropriate) ERA CLP Soil Lot # D045540 Other:** _____

**GFAA LCSW =** GFLCSW, ID#18987, _____ mls. added
**ICP LCSW =** QCP-CICV-1, ID#13109, 0.25 mls. added
QCP CICV-2, ID#12778, 0.25 mls. added
QCP CICV-3, ID#14972, 0.25 mls. added
SS4, ID#20873, 0.50 mls. Added

**TCLP Spike/LCSE**
TSS1 MET1-85-F _____ mls. Added

**SPIKE INFO**
K-METSS1 ID#20982 0.50 mls added K-METSS2 ID#16643 _____ mls added K-METSS5 ID#20981 0.50 mls added
K-MET SS3 ID#21052 0.50 mls added 200.8 1000ppb Stock ID#17425 _____ mls added
K-MET SS4 ID#20873 0.50 mls added Ag 1000ppb Stock ID#11605 _____ mls added
**Additional spikes:** _____
**Comments:** _____

**Analyst** [signature] **Date** 9/23/10
**Reviewer** [signature] **Date** 9/24/10

metdig.xls

# METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

| Solution Name | Element | mLs of 1000ppm Solution | Final Volume | Solution Conc. mg/L | Enter mls Added |
|---|---|---|---|---|---|
| K-MET SS1 | HNO3 | 50.0 | 1000ml | - | 0.5 |
| | Al | 100* | 1000ml | 200 | |
| | Ag | 100* | 1000ml | 5 | |
| | Ba | 100* | 1000ml | 200 | |
| | Be | 100* | 1000ml | 5 | |
| | Cd | 100* | 1000ml | 5 | |
| | Co | 100* | 1000ml | 50 | |
| | Cr | 100* | 1000ml | 20 | |
| | Cu | 100* | 1000ml | 25 | |
| | Fe | 100* | 1000ml | 100 | |
| | Pb | 100* | 1000ml | 50 | |
| | Mn | 100* | 1000ml | 50 | |
| | Ni | 100* | 1000ml | 50 | |
| | Sb | 50 | 1000ml | 50 | |
| | V | 100* | 1000ml | 50 | |
| | Zn | 100* | 1000ml | 50 | |
| K-MET SS2 | HNO3 | 25.0 | 500ml | - | |
| | As | 2.0 | 500ml | 4 | |
| | Cd | 2.0 | 500ml | 4 | |
| | Pb | 2.0 | 500ml | 4 | |
| | Se | 2.0 | 500ml | 4 | |
| | Tl | 2.0 | 500ml | 4 | |
| | Cu | 2.0 | 500ml | 4 | |
| K-MET SS3 | HNO3 | 25.0 | 500ml | - | 0.5 |
| | As | 50.0 | 500ml | 100 | |
| | Se | 50.0 | 500ml | 100 | |
| | Tl | 50.0 | 500ml | 100 | |
| K-MET SS4 | HNO3 | 25 | 500ml | - | 0.5 |
| | B | 50 | 500ml | 100 | |
| | Mo | 50 | 500ml | 100 | |
| K-MET SS5 | HNO3 | 10.0 | 200ml | - | 0.5 |
| | K** | 20 | 200ml | 1000 | |
| | Na** | 20 | 200ml | 1000 | |
| | Mg** | 20 | 200ml | 1000 | |
| | Ca** | 20 | 200ml | 1000 | |

| | | | | | |
|---|---|---|---|---|---|
| K-MET GFLCSW | HNO3 | 10.0 | 1000ml | - | 0.25 |
| | As, Pb, Se, Tl | 5.0 | 1000ml | 2.5 | |
| | Cd | - | - | 1.25 | |
| | Cu | 2.5 | 1000ml | 2.5 | |
| K-MET QCP-CICV-1 | Ca, Mg, Na, K | no dilution | - | 2500 | |
| | Al, Ba | no dilution | - | 1000 | |
| | Fe | no dilution | - | 500 | |
| | Co, Mn, Ni, V, Zn | no dilution | - | 250 | |
| | Cu, Ag | no dilution | - | 125 | |
| | Cr | no dilution | - | 100 | |
| | Be | no dilution | - | 25 | |
| K-MET QCP-CICV-2 | Sb | no dilution | - | 500 | 0.25 |
| K-MET QCP-CICV-3 | As, Pb, Se, Tl | no dilution | - | 500 | 0.25 |
| | Cd | no dilution | - | 250 | |

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

| Standard | mls of standard | ppm | Logbook # | Exp. Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Element Analyzed: Se Hydride Instrument: K-FLAA-02
Service Request #: K1007139, K1007273, K1007457, K1008857
K1009089, K1009225, K1009165, K1009299 (H20'S)
Batch QC SR's #:
Calibration Std.: AA1-13-F Expiration Date: 3/3/2011
2nd Source Std.: AA1-13-B Expiration Date: 11/3/2010
Starlims #: 215958
Run #:

# Hydride Data Review Form

| | Yes | No | NA |
|---|---|---|---|
| 1 ICV within 10% of true Value | X | | |
| 2. Calibration data included | X | | |
| 3. CCV's in control | X | | |
| 4. CCB's and/or ICB's below MRL | X | | |
| 5. All reported Results within Cal. Range | X | | |
| 6. All Calculations are Correct | X | | |

Comments

Primary Reviewed by: JDB Date: 9/9/10

Secondary Reviewed by: BMA Date: 9/22/10

COLUMBIA ANALYTICAL SERVICES, INC.
FAA Run Log

| **Method:** (Circle Method Used)<br>7742 7062<br>Other: _____<br>Element: As Se | **Service Request # :** |
|---|---|

| SAMPLE NUMBER | Dilution Factor | Measured (µg/L) | Recoveries (ICV, CCV, CRA, LCS, Matrix Spk.) | | Comments<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|
| ICV | - | 7.934 | 106% | | |
| ICB | - | 0.077 | | | |
| CRA | - | 0.530 | 106% | | |
| CCV | - | 7.468 | 100% | | |
| CCB | - | 0.028 | | | |
| PBW | 1/2 | 0.011 | | | |
| LCSW | 1/2 | 4.679 | 93% | | |
| K1007139-001 | 1/2 | 0.020 | | | |
| K1007139-001A | 1/2 | 5.103 | 102% | | |
| K1007139-008 | 1/2 | 0.065 | | | |
| K1007273-020 | 1/2 | 0.008 | | | |
| K1007457-001 | 1/2 | 0.015 | | | |
| K1008857-003 | 1/2 | -0.055 | | | |
| K1009089-001 | 1/2 | 0.498 | | | |
| K1009089-001D | 1/2 | 0.528 | | | |
| CCV | | 7.490 | 100% | | |
| CCB | | 0.002 | | | |
| K1009089-001S | 1/2 | 7.375 | 86% | | |
| K1009225-014 | 1/2 | 0.064 | | | |
| PBW | 1/2 | 0.003 | | | |
| LCSW | 1/2 | 4.721 | 94% | | |
| K1009165-001 | 1/2 | 0.070 | | | |
| K1009165-001A | 1/2 | 4.615 | 92% | | |
| K1009165-002 | 1/2 | 0.863 | | | |
| K1009299-001 | 1/2 | 0.078 | | | |
| K1009299-001D | 1/2 | 0.034 | | | |
| K1009299-001S | 1/2 | 6.897 | 85% | | |
| CCV | | 7.498 | 100% | | |
| CCB | | 0.042 | | | |
| ~~K1009299-002~~ | ~~1/2~~ | ~~1.049~~ | JB 9/9/10 | | |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| Josh D Baird | 9/9/10 | 1 |

R:\ICP\MISC\FLAA\Hydride Tissue Template

COLUMBIA ANALYTICAL SERVICES, INC.

**FAA Run Log**

| **Method:** (Circle Method Used)<br>7742 7062<br>Other:_____<br>Element: As Se | **Service Request # :** |
|---|---|

| SAMPLE NUMBER | Dilution Factor | Measured (µg/L) | Recoveries (ICV, CCV, CRA, LCS, Matrix Spk.) | | Comments<br>Post Spike = 5 ppb |
|---|---|---|---|---|---|
| CCV | - | 7.459 | 99% | | |
| ~~CCB~~ | - | ~~0.366~~ JB | 9/9/10 | | |
| CCB | - | 0.001 | | | |
| K1009299-002 | 1/2 | 0.496 | | | |
| CCV | - | 7.511 | 100% | | |
| CCB | - | 0.070 | | | |

| **True Values/QC Limits:** | LCSW | Water Spike | LCSS (ERA D045540) | Soil Spike |
|---|---|---|---|---|
| Arsenic: | 10ppb (80-120%) | 16ppb (75-125%) | 146.0mg/kg (80-120%) | 20ppb (75-125%) |
| Selenium | 10ppb (72-125%) | 16ppb (66-128%) | 192.0mg/kg (62-147%) | 20ppb (64-131%) |

Cx = MSA Corrected Concentration (as per method)

| **Analyst** | **Date:** | **Page Number:** |
|---|---|---|
| Joan O Boil | 9/9/10 | 2 |

R:\ICP\MISC\FLAA\Hydride Tissue Template

==========

**Analysis Begun**

**Logged In Analyst: ACQMET10** **Technique: AA FIAS-Flame**
**Spectrometer Model: AAnalyst 200, S/N 200S5061701** **Autosampler Model: AS-90**

**Sample Information File: C:\data-AA\ACQMET10\Sample Information\090810-Se.sif**
**Batch ID: 090810-Se1**
**Results Data Set: 090810-Se1**
**Results Library: R:\ICP\WIP\DATA\K-FLAA-02\Results060614 ENV.mdb**

==========

**Sequence No.: 1** **Autosampler Location: 1**
**Sample ID: Cal Blk** **Date Collected: 9/8/2010 1:43:25 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Cal Blk**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [0.00] | 0.003 | 0.003 | 0.003 | | | 13:43:41 | Yes |
| 2 | | [0.00] | 0.003 | 0.015 | 0.003 | | | 13:44:19 | Yes |
| 3 | | [0.00] | 0.002 | 0.001 | 0.002 | | | 13:44:55 | Yes |
| Mean: | | [0.00] | 0.003 | | | | | | |
| SD: | | 0.00 | 0.0006 | | | | | | |
| %RSD: | | 0.00 | 22.16 | | | | | | |

Auto-zero performed.

==========

**Sequence No.: 2** **Autosampler Location: 2**
**Sample ID: Std 0.5** **Date Collected: 9/8/2010 1:45:47 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 0.5**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [0.5] | 0.011 | 0.054 | 0.014 | | | 13:46:03 | Yes |
| 2 | | [0.5] | 0.011 | 0.055 | 0.014 | | | 13:46:39 | Yes |
| 3 | | [0.5] | 0.012 | 0.055 | 0.014 | | | 13:47:15 | Yes |
| Mean: | | [0.5] | 0.011 | | | | | | |
| SD: | | 0.0 | 0.0002 | | | | | | |
| %RSD: | | 0.0 | 1.39 | | | | | | |

Standard number 1 applied. [0.5]
Correlation Coef.: 1.000000 Slope: 0.02279 Intercept: 0.00000

==========

**Sequence No.: 3** **Autosampler Location: 3**
**Sample ID: Std 1.0** **Date Collected: 9/8/2010 1:48:07 PM**
**Analyst:** **Data Type: Original**

---

**Replicate Data: Std 1.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [1.0] | 0.022 | 0.096 | 0.025 | | | 13:48:25 | Yes |
| 2 | | [1.0] | 0.022 | 0.105 | 0.025 | | | 13:49:01 | Yes |
| 3 | | [1.0] | 0.023 | 0.104 | 0.025 | | | 13:49:36 | Yes |
| Mean: | | [1.0] | 0.022 | | | | | | |
| SD: | | 0.0 | 0.0002 | | | | | | |
| %RSD: | | 0.0 | 0.68 | | | | | | |

Standard number 2 applied. [1.0]
Correlation Coef.: 0.999792 Slope: 0.02250 Intercept: 0.00000

==========

**Sequence No.: 4** **Autosampler Location: 4**

**Sample ID: Std 5.0**
**Analyst:**

**Date Collected: 9/8/2010 1:50:29 PM**
**Data Type: Original**

---

**Replicate Data: Std 5.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [5.0] | 0.109 | 0.461 | 0.112 | | | 13:50:47 | Yes |
| 2 | | [5.0] | 0.110 | 0.471 | 0.112 | | | 13:51:23 | Yes |
| 3 | | [5.0] | 0.110 | 0.457 | 0.113 | | | 13:51:58 | Yes |
| Mean: | | [5.0] | 0.110 | | | | | | |
| SD: | | 0.0 | 0.0004 | | | | | | |
| %RSD: | | 0.0 | 0.41 | | | | | | |

Standard number 3 applied. [5.0]
Correlation Coef.: 0.999961 Slope: 0.02194 Intercept: 0.00000

---

**Sequence No.: 5**
**Sample ID: Std 7.5**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/8/2010 1:52:52 PM**
**Data Type: Original**

---

**Replicate Data: Std 7.5**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [7.5] | 0.160 | 0.682 | 0.163 | | | 13:53:10 | Yes |
| 2 | | [7.5] | 0.162 | 0.677 | 0.165 | | | 13:53:45 | Yes |
| 3 | | [7.5] | 0.163 | 0.697 | 0.166 | | | 13:54:21 | Yes |
| Mean: | | [7.5] | 0.162 | | | | | | |
| SD: | | 0.0 | 0.0014 | | | | | | |
| %RSD: | | 0.0 | 0.88 | | | | | | |

Standard number 4 applied. [7.5]
Correlation Coef.: 0.999904 Slope: 0.02168 Intercept: 0.00000

---

**Sequence No.: 6**
**Sample ID: Std 10.0**
**Analyst:**

**Autosampler Location: 6**
**Date Collected: 9/8/2010 1:55:16 PM**
**Data Type: Original**

---

**Replicate Data: Std 10.0**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | [10.0] | 0.209 | 0.902 | 0.212 | | | 13:55:34 | Yes |
| 2 | | [10.0] | 0.209 | 0.880 | 0.211 | | | 13:56:10 | Yes |
| 3 | | [10.0] | 0.210 | 0.890 | 0.212 | | | 13:56:45 | Yes |
| Mean: | | [10.0] | 0.209 | | | | | | |
| SD: | | 0.0 | 0.0005 | | | | | | |
| %RSD: | | 0.0 | 0.22 | | | | | | |

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999506 Slope: 0.02126 Intercept: 0.00000

---

**Calibration data for Se 196.03** **Equation: Linear Through Zero**

| ID | Mean Signal (Abs) | Entered Conc. ug/L | Calculated Conc. ug/L | Standard Deviation | %RSD |
|---|---|---|---|---|---|
| Cal Blk | 0.0000 | 0 | 0.000 | 0.00 | 22.2 |
| Std 0.5 | 0.0114 | 0.5 | 0.536 | 0.00 | 1.4 |
| Std 1.0 | 0.0224 | 1.0 | 1.055 | 0.00 | 0.7 |
| Std 5.0 | 0.1095 | 5.0 | 5.152 | 0.00 | 0.4 |
| Std 7.5 | 0.1617 | 7.5 | 7.604 | 0.00 | 0.9 |
| Std 10.0 | 0.2090 | 10.0 | 9.832 | 0.00 | 0.2 |

Correlation Coef.: 0.999506 Slope: 0.02126 Intercept: 0.00000

---

**Sequence No.: 7**
**Sample ID: ICV**
**Analyst:**

**Autosampler Location: 7**
**Date Collected: 9/8/2010 1:57:41 PM**
**Data Type: Original**

---

**Replicate Data: ICV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.076 | 8.076 | 0.172 | 0.695 | 0.174 | | | 13:57:59 | Yes |
| 2 | 7.876 | 7.876 | 0.167 | 0.691 | 0.170 | | | 13:58:35 | Yes |
| 3 | 7.850 | 7.850 | 0.167 | 0.699 | 0.170 | | | 13:59:10 | Yes |
| Mean: | 7.934 | 7.934 | 0.169 | | | | | | |
| SD: | 0.124 | 0.124 | 0.0026 | | | | | | |
| %RSD: | 1.559 | 1.559 | 1.56 | | | | | | |

QC value within limits for Se 196.03 Recovery = 105.79%
All analyte(s) passed QC.

---

**Sequence No.: 8**
**Sample ID: ICB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/8/2010 2:00:05 PM**
**Data Type: Original**

---

**Replicate Data: ICB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.133 | 0.133 | 0.003 | 0.020 | 0.006 | | | 14:00:21 | Yes |
| 2 | 0.068 | 0.068 | 0.001 | 0.008 | 0.004 | | | 14:00:56 | Yes |
| 3 | 0.030 | 0.030 | 0.001 | 0.014 | 0.003 | | | 14:01:32 | Yes |
| Mean: | 0.077 | 0.077 | 0.002 | | | | | | |
| SD: | 0.052 | 0.052 | 0.0011 | | | | | | |
| %RSD: | 67.60 | 67.60 | 67.60 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 9**
**Sample ID: CRA**
**Analyst:**

**Autosampler Location: 2**
**Date Collected: 9/8/2010 2:02:25 PM**
**Data Type: Original**

---

**Replicate Data: CRA**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.498 | 0.498 | 0.011 | 0.055 | 0.013 | | | 14:02:41 | Yes |
| 2 | 0.528 | 0.528 | 0.011 | 0.053 | 0.014 | | | 14:03:17 | Yes |
| 3 | 0.564 | 0.564 | 0.012 | 0.066 | 0.015 | | | 14:03:52 | Yes |
| Mean: | 0.530 | 0.530 | 0.011 | | | | | | |
| SD: | 0.033 | 0.033 | 0.0007 | | | | | | |
| %RSD: | 6.243 | 6.243 | 6.24 | | | | | | |

QC value within limits for Se 196.03 Recovery = 105.95%
All analyte(s) passed QC.

---

**Sequence No.: 10**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/8/2010 2:04:45 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.425 | 7.425 | 0.158 | 0.680 | 0.161 | | | 14:05:04 | Yes |
| 2 | 7.484 | 7.484 | 0.159 | 0.670 | 0.162 | | | 14:05:39 | Yes |
| 3 | 7.496 | 7.496 | 0.159 | 0.680 | 0.162 | | | 14:06:15 | Yes |
| Mean: | 7.468 | 7.468 | 0.159 | | | | | | |
| SD: | 0.038 | 0.038 | 0.0008 | | | | | | |

%RSD: 0.513 0.513 0.51
QC value within limits for Se 196.03 Recovery = 99.58%
All analyte(s) passed QC.

==========

**Sequence No.: 11**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/8/2010 2:07:20 PM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.076 | 0.076 | 0.002 | 0.015 | 0.004 | | | 14:07:36 | Yes |
| 2 | 0.018 | 0.018 | 0.000 | 0.005 | 0.003 | | | 14:08:12 | Yes |
| 3 | -0.010 | -0.010 | -0.000 | 0.005 | 0.002 | | | 14:08:47 | Yes |
| Mean: | 0.028 | 0.028 | 0.001 | | | | | | |
| SD: | 0.044 | 0.044 | 0.0009 | | | | | | |
| %RSD: | 157.4 | 157.4 | 157.44 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

==========

**Sequence No.: 12**
**Sample ID: PBW**
**Analyst:**

**Autosampler Location: 9**
**Date Collected: 9/8/2010 2:09:40 PM**
**Data Type: Original**

---

**Replicate Data: PBW**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.013 | 0.013 | 0.000 | 0.010 | 0.003 | | | 14:09:57 | Yes |
| 2 | -0.002 | -0.002 | -0.000 | 0.006 | 0.003 | | | 14:10:32 | Yes |
| 3 | 0.022 | 0.022 | 0.000 | 0.007 | 0.003 | | | 14:11:08 | Yes |
| Mean: | 0.011 | 0.011 | 0.000 | | | | | | |
| SD: | 0.012 | 0.012 | 0.0003 | | | | | | |
| %RSD: | 110.5 | 110.5 | 110.48 | | | | | | |

==========

**Sequence No.: 13**
**Sample ID: LCSW**
**Analyst:**

**Autosampler Location: 10**
**Date Collected: 9/8/2010 2:12:01 PM**
**Data Type: Original**

---

**Replicate Data: LCSW**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.613 | 4.613 | 0.098 | 0.426 | 0.101 | | | 14:12:17 | Yes |
| 2 | 4.694 | 4.694 | 0.100 | 0.431 | 0.103 | | | 14:12:53 | Yes |
| 3 | 4.731 | 4.731 | 0.101 | 0.437 | 0.103 | | | 14:13:28 | Yes |
| Mean: | 4.679 | 4.679 | 0.099 | | | | | | |
| SD: | 0.060 | 0.060 | 0.0013 | | | | | | |
| %RSD: | 1.289 | 1.289 | 1.29 | | | | | | |

==========

**Sequence No.: 14**
**Sample ID: K1007139-001**
**Analyst:**

**Autosampler Location: 11**
**Date Collected: 9/8/2010 2:14:21 PM**
**Data Type: Original**

---

**Replicate Data: K1007139-001**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.055 | 0.055 | 0.001 | 0.012 | 0.004 | | | 14:14:38 | Yes |
| 2 | 0.018 | 0.018 | 0.000 | 0.009 | 0.003 | | | 14:15:14 | Yes |
| 3 | -0.013 | -0.013 | -0.000 | 0.003 | 0.002 | | | 14:15:50 | Yes |
| Mean: | 0.020 | 0.020 | 0.000 | | | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.034 | 0.034 | 0.0007 |
| %RSD: | 171.2 | 171.2 | 171.24 |

==========

**Sequence No.: 15**
**Sample ID: K1007139-001A**
**Analyst:**

**Autosampler Location: 12**
**Date Collected: 9/8/2010 2:16:43 PM**
**Data Type: Original**

---

**Replicate Data: K1007139-001A**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.062 | 5.062 | 0.108 | 0.451 | 0.110 | | | 14:17:00 | Yes |
| 2 | 5.101 | 5.101 | 0.108 | 0.468 | 0.111 | | | 14:17:36 | Yes |
| 3 | 5.145 | 5.145 | 0.109 | 0.460 | 0.112 | | | 14:18:12 | Yes |
| Mean: | 5.103 | 5.103 | 0.108 | | | | | | |
| SD: | 0.042 | 0.042 | 0.0009 | | | | | | |
| %RSD: | 0.819 | 0.819 | 0.82 | | | | | | |

==========

**Sequence No.: 16**
**Sample ID: K1007139-008**
**Analyst:**

**Autosampler Location: 13**
**Date Collected: 9/8/2010 2:19:06 PM**
**Data Type: Original**

---

**Replicate Data: K1007139-008**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.077 | 0.077 | 0.002 | 0.016 | 0.004 | | | 14:19:24 | Yes |
| 2 | 0.079 | 0.079 | 0.002 | 0.023 | 0.004 | | | 14:20:00 | Yes |
| 3 | 0.038 | 0.038 | 0.001 | 0.017 | 0.004 | | | 14:20:36 | Yes |
| Mean: | 0.065 | 0.065 | 0.001 | | | | | | |
| SD: | 0.023 | 0.023 | 0.0005 | | | | | | |
| %RSD: | 35.92 | 35.92 | 35.92 | | | | | | |

==========

**Sequence No.: 17**
**Sample ID: K1007273-020**
**Analyst:**

**Autosampler Location: 14**
**Date Collected: 9/8/2010 2:21:31 PM**
**Data Type: Original**

---

**Replicate Data: K1007273-020**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.031 | 0.031 | 0.001 | 0.016 | 0.003 | | | 14:21:49 | Yes |
| 2 | 0.007 | 0.007 | 0.000 | 0.011 | 0.003 | | | 14:22:25 | Yes |
| 3 | -0.014 | -0.014 | -0.000 | 0.007 | 0.002 | | | 14:23:01 | Yes |
| Mean: | 0.008 | 0.008 | 0.000 | | | | | | |
| SD: | 0.023 | 0.023 | 0.0005 | | | | | | |
| %RSD: | 286.3 | 286.3 | 286.34 | | | | | | |

==========

**Sequence No.: 18**
**Sample ID: K1007457-001**
**Analyst:**

**Autosampler Location: 15**
**Date Collected: 9/8/2010 2:23:56 PM**
**Data Type: Original**

---

**Replicate Data: K1007457-001**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.020 | 0.020 | 0.000 | 0.015 | 0.003 | | | 14:24:15 | Yes |
| 2 | 0.030 | 0.030 | 0.001 | 0.009 | 0.003 | | | 14:24:51 | Yes |
| 3 | -0.005 | -0.005 | -0.000 | 0.008 | 0.003 | | | 14:25:29 | Yes |
| Mean: | 0.015 | 0.015 | 0.000 | | | | | | |
| SD: | 0.018 | 0.018 | 0.0004 | | | | | | |
| %RSD: | 118.1 | 118.1 | 118.05 | | | | | | |

Sequence No.: 19
Sample ID: K1008857-003
Analyst:

Autosampler Location: 16
Date Collected: 9/8/2010 2:26:24 PM
Data Type: Original

Replicate Data: K1008857-003

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.086 | -0.086 | -0.002 | -0.025 | 0.001 | | | 14:26:43 | Yes |
| 2 | -0.036 | -0.036 | -0.001 | -0.005 | 0.002 | | | 14:27:22 | Yes |
| 3 | -0.042 | -0.042 | -0.001 | -0.012 | 0.002 | | | 14:28:00 | Yes |
| Mean: | -0.055 | -0.055 | -0.001 | | | | | | |
| SD: | 0.027 | 0.027 | 0.0006 | | | | | | |
| %RSD: | 50.07 | 50.07 | 50.07 | | | | | | |

Sequence No.: 20
Sample ID: K1009089-001
Analyst:

Autosampler Location: 17
Date Collected: 9/8/2010 2:28:55 PM
Data Type: Original

Replicate Data: K1009089-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.484 | 0.484 | 0.010 | 0.027 | 0.013 | | | 14:29:11 | Yes |
| 2 | 0.501 | 0.501 | 0.011 | 0.036 | 0.013 | | | 14:29:49 | Yes |
| 3 | 0.509 | 0.509 | 0.011 | 0.055 | 0.014 | | | 14:30:27 | Yes |
| Mean: | 0.498 | 0.498 | 0.011 | | | | | | |
| SD: | 0.013 | 0.013 | 0.0003 | | | | | | |
| %RSD: | 2.590 | 2.590 | 2.59 | | | | | | |

Sequence No.: 21
Sample ID: K1009089-001D
Analyst:

Autosampler Location: 18
Date Collected: 9/8/2010 2:31:19 PM
Data Type: Original

Replicate Data: K1009089-001D

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.540 | 0.540 | 0.011 | 0.056 | 0.014 | | | 14:31:35 | Yes |
| 2 | 0.554 | 0.554 | 0.012 | 0.060 | 0.014 | | | 14:32:13 | Yes |
| 3 | 0.489 | 0.489 | 0.010 | 0.052 | 0.013 | | | 14:32:51 | Yes |
| Mean: | 0.528 | 0.528 | 0.011 | | | | | | |
| SD: | 0.034 | 0.034 | 0.0007 | | | | | | |
| %RSD: | 6.436 | 6.436 | 6.44 | | | | | | |

Sequence No.: 22
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 9/8/2010 2:33:43 PM
Data Type: Original

Replicate Data: CCV

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.432 | 7.432 | 0.158 | 0.655 | 0.161 | | | 14:34:00 | Yes |
| 2 | 7.477 | 7.477 | 0.159 | 0.678 | 0.162 | | | 14:34:36 | Yes |
| 3 | 7.562 | 7.562 | 0.161 | 0.686 | 0.163 | | | 14:35:14 | Yes |
| Mean: | 7.490 | 7.490 | 0.159 | | | | | | |
| SD: | 0.066 | 0.066 | 0.0014 | | | | | | |
| %RSD: | 0.880 | 0.880 | 0.88 | | | | | | |

QC value within limits for Se 196.03 Recovery = 99.87%
All analyte(s) passed QC.

Sequence No.: 23
Sample ID: CCB
Analyst:

Autosampler Location: 1
Date Collected: 9/8/2010 2:36:08 PM
Data Type: Original

Replicate Data: CCB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.002 | -0.002 | -0.000 | -0.026 | 0.003 | | | 14:36:24 | Yes |
| 2 | 0.027 | 0.027 | 0.001 | 0.004 | 0.003 | | | 14:37:00 | Yes |
| 3 | -0.018 | -0.018 | -0.000 | -0.002 | 0.002 | | | 14:37:36 | Yes |
| Mean: | 0.002 | 0.002 | 0.000 | | | | | | |
| SD: | 0.023 | 0.023 | 0.0005 | | | | | | |
| %RSD: | >999.9% | >999.9% | >999.9% | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24
Sample ID: K1009089-001S
Analyst:

Autosampler Location: 19
Date Collected: 9/8/2010 2:38:28 PM
Data Type: Original

Replicate Data: K1009089-001S

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.241 | 7.241 | 0.154 | 0.671 | 0.157 | | | 14:38:44 | Yes |
| 2 | 7.347 | 7.347 | 0.156 | 0.699 | 0.159 | | | 14:39:20 | Yes |
| 3 | 7.536 | 7.536 | 0.160 | 0.698 | 0.163 | | | 14:39:55 | Yes |
| Mean: | 7.375 | 7.375 | 0.157 | | | | | | |
| SD: | 0.149 | 0.149 | 0.0032 | | | | | | |
| %RSD: | 2.027 | 2.027 | 2.03 | | | | | | |

Sequence No.: 25
Sample ID: K1009225-014
Analyst:

Autosampler Location: 20
Date Collected: 9/8/2010 2:40:48 PM
Data Type: Original

Replicate Data: K1009225-014

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.126 | 0.126 | 0.003 | 0.020 | 0.005 | | | 14:41:04 | Yes |
| 2 | 0.067 | 0.067 | 0.001 | 0.013 | 0.004 | | | 14:41:40 | Yes |
| 3 | 0.000 | 0.000 | -0.000 | -0.001 | 0.003 | | | 14:42:16 | Yes |
| Mean: | 0.064 | 0.064 | 0.001 | | | | | | |
| SD: | 0.063 | 0.063 | 0.0013 | | | | | | |
| %RSD: | 98.00 | 98.00 | 98.00 | | | | | | |

Sequence No.: 26
Sample ID: PBW
Analyst:

Autosampler Location: 21
Date Collected: 9/8/2010 2:43:09 PM
Data Type: Original

Replicate Data: PBW

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.002 | 0.002 | 0.000 | 0.015 | 0.003 | | | 14:43:25 | Yes |
| 2 | 0.022 | 0.022 | 0.000 | -0.004 | 0.003 | | | 14:44:01 | Yes |
| 3 | -0.014 | -0.014 | -0.000 | -0.002 | 0.002 | | | 14:44:37 | Yes |
| Mean: | 0.003 | 0.003 | 0.000 | | | | | | |
| SD: | 0.018 | 0.018 | 0.0004 | | | | | | |
| %RSD: | 594.2 | 594.2 | 594.22 | | | | | | |

Sequence No.: 27

Autosampler Location: 22

Sample ID: LCSW
Analyst:

Date Collected: 9/8/2010 2:45:30 PM
Data Type: Original

Replicate Data: LCSW

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.786 | 4.786 | 0.102 | 0.429 | 0.104 | | | 14:45:46 | Yes |
| 2 | 4.713 | 4.713 | 0.100 | 0.436 | 0.103 | | | 14:46:22 | Yes |
| 3 | 4.663 | 4.663 | 0.099 | 0.436 | 0.102 | | | 14:46:58 | Yes |
| Mean: | 4.721 | 4.721 | 0.100 | | | | | | |
| SD: | 0.062 | 0.062 | 0.0013 | | | | | | |
| %RSD: | 1.313 | 1.313 | 1.31 | | | | | | |

Sequence No.: 28
Sample ID: K1009165-001
Analyst:

Autosampler Location: 23
Date Collected: 9/8/2010 2:47:51 PM
Data Type: Original

Replicate Data: K1009165-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.050 | 0.050 | 0.001 | -0.003 | 0.004 | | | 14:48:08 | Yes |
| 2 | 0.076 | 0.076 | 0.002 | 0.009 | 0.004 | | | 14:48:44 | Yes |
| 3 | 0.084 | 0.084 | 0.002 | 0.015 | 0.004 | | | 14:49:20 | Yes |
| Mean: | 0.070 | 0.070 | 0.001 | | | | | | |
| SD: | 0.018 | 0.018 | 0.0004 | | | | | | |
| %RSD: | 25.56 | 25.56 | 25.56 | | | | | | |

Sequence No.: 29
Sample ID: K1009165-001A
Analyst:

Autosampler Location: 24
Date Collected: 9/8/2010 2:50:13 PM
Data Type: Original

Replicate Data: K1009165-001A

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.586 | 4.586 | 0.097 | 0.438 | 0.100 | | | 14:50:31 | Yes |
| 2 | 4.590 | 4.590 | 0.098 | 0.438 | 0.100 | | | 14:51:06 | Yes |
| 3 | 4.669 | 4.669 | 0.099 | 0.450 | 0.102 | | | 14:51:42 | Yes |
| Mean: | 4.615 | 4.615 | 0.098 | | | | | | |
| SD: | 0.047 | 0.047 | 0.0010 | | | | | | |
| %RSD: | 1.019 | 1.019 | 1.02 | | | | | | |

Sequence No.: 30
Sample ID: K1009165-002
Analyst:

Autosampler Location: 25
Date Collected: 9/8/2010 2:52:37 PM
Data Type: Original

Replicate Data: K1009165-002

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.794 | 0.794 | 0.017 | 0.093 | 0.020 | | | 14:52:55 | Yes |
| 2 | 0.864 | 0.864 | 0.018 | 0.100 | 0.021 | | | 14:53:30 | Yes |
| 3 | 0.932 | 0.932 | 0.020 | 0.109 | 0.023 | | | 14:54:06 | Yes |
| Mean: | 0.863 | 0.863 | 0.018 | | | | | | |
| SD: | 0.069 | 0.069 | 0.0015 | | | | | | |
| %RSD: | 7.984 | 7.984 | 7.98 | | | | | | |

Sequence No.: 31
Sample ID: K1009299-001
Analyst:

Autosampler Location: 26
Date Collected: 9/8/2010 2:55:00 PM
Data Type: Original

Replicate Data: K1009299-001

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.089 | 0.089 | 0.002 | 0.024 | 0.005 | | | 14:55:18 | Yes |
| 2 | 0.061 | 0.061 | 0.001 | 0.012 | 0.004 | | | 14:55:54 | Yes |
| 3 | 0.085 | 0.085 | 0.002 | 0.020 | 0.005 | | | 14:56:30 | Yes |
| Mean: | 0.078 | 0.078 | 0.002 | | | | | | |
| SD: | 0.015 | 0.015 | 0.0003 | | | | | | |
| %RSD: | 19.18 | 19.18 | 19.18 | | | | | | |

Sequence No.: 32
Sample ID: K1009299-001D
Analyst:

Autosampler Location: 27
Date Collected: 9/8/2010 2:57:24 PM
Data Type: Original

Replicate Data: K1009299-001D

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.042 | 0.042 | 0.001 | 0.004 | 0.004 | | | 14:57:42 | Yes |
| 2 | 0.025 | 0.025 | 0.001 | 0.006 | 0.003 | | | 14:58:18 | Yes |
| 3 | 0.036 | 0.036 | 0.001 | 0.006 | 0.003 | | | 14:58:54 | Yes |
| Mean: | 0.034 | 0.034 | 0.001 | | | | | | |
| SD: | 0.009 | 0.009 | 0.0002 | | | | | | |
| %RSD: | 25.65 | 25.65 | 25.65 | | | | | | |

Sequence No.: 33
Sample ID: K1009299-001S
Analyst:

Autosampler Location: 28
Date Collected: 9/8/2010 2:59:49 PM
Data Type: Original

Replicate Data: K1009299-001S

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.723 | 6.723 | 0.143 | 0.634 | 0.146 | | | 15:00:07 | Yes |
| 2 | 6.946 | 6.946 | 0.148 | 0.661 | 0.150 | | | 15:00:43 | Yes |
| 3 | 7.022 | 7.022 | 0.149 | 0.655 | 0.152 | | | 15:01:18 | Yes |
| Mean: | 6.897 | 6.897 | 0.147 | | | | | | |
| SD: | 0.155 | 0.155 | 0.0033 | | | | | | |
| %RSD: | 2.254 | 2.254 | 2.25 | | | | | | |

Sequence No.: 34
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 9/8/2010 3:02:13 PM
Data Type: Original

Replicate Data: CCV

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.408 | 7.408 | 0.157 | 0.675 | 0.160 | | | 15:02:31 | Yes |
| 2 | 7.483 | 7.483 | 0.159 | 0.676 | 0.162 | | | 15:03:07 | Yes |
| 3 | 7.603 | 7.603 | 0.162 | 0.682 | 0.164 | | | 15:03:43 | Yes |
| Mean: | 7.498 | 7.498 | 0.159 | | | | | | |
| SD: | 0.098 | 0.098 | 0.0021 | | | | | | |
| %RSD: | 1.313 | 1.313 | 1.31 | | | | | | |

QC value within limits for Se 196.03 Recovery = 99.97%
All analyte(s) passed QC.

Sequence No.: 35
Sample ID: CCB
Analyst:

Autosampler Location: 1
Date Collected: 9/8/2010 3:04:37 PM
Data Type: Original

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.054 | 0.054 | 0.001 | 0.009 | 0.004 | | | 15:04:53 | Yes |
| 2 | 0.052 | 0.052 | 0.001 | 0.019 | 0.004 | | | 15:05:29 | Yes |
| 3 | 0.021 | 0.021 | 0.000 | 0.015 | 0.003 | | | 15:06:04 | Yes |
| Mean: | 0.042 | 0.042 | 0.001 | | | | | | |
| SD: | 0.019 | 0.019 | 0.0004 | | | | | | |
| %RSD: | 43.86 | 43.86 | 43.86 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 36**
**Sample ID: K1009299-002**
**Analyst:**

**Autosampler Location: 29**
**Date Collected: 9/8/2010 3:06:57 PM**
**Data Type: Original**

---

**Replicate Data: K1009299-002**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.406 | 0.406 | 0.009 | 0.059 | 0.011 | | | 15:07:15 | Yes |
| 2 | 1.738 | 1.738 | 0.037 | 0.256 | 0.040 | | | 15:07:51 | Yes |
| 3 | 1.004 | 1.004 | 0.021 | 0.108 | 0.024 | | | 15:08:27 | Yes |
| Mean: | 1.049 | 1.049 | 0.022 | | | | | | |
| SD: | 0.667 | 0.667 | 0.0142 | | | | | | |
| %RSD: | 63.57 | 63.57 | 63.57 | | | | | | |

---

**Sequence No.: 37**
**Sample ID: CCV**
**Analyst:**

**Autosampler Location: 5**
**Date Collected: 9/8/2010 3:09:22 PM**
**Data Type: Original**

---

**Replicate Data: CCV**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.377 | 7.377 | 0.157 | 0.669 | 0.160 | | | 15:09:40 | Yes |
| 2 | 7.458 | 7.458 | 0.159 | 0.674 | 0.161 | | | 15:10:15 | Yes |
| 3 | 7.542 | 7.542 | 0.160 | 0.688 | 0.163 | | | 15:10:51 | Yes |
| Mean: | 7.459 | 7.459 | 0.159 | | | | | | |
| SD: | 0.083 | 0.083 | 0.0018 | | | | | | |
| %RSD: | 1.107 | 1.107 | 1.11 | | | | | | |

QC value within limits for Se 196.03 Recovery = 99.45%
All analyte(s) passed QC.

---

**Sequence No.: 38**
**Sample ID: CCB**
**Analyst:**

**Autosampler Location: 1**
**Date Collected: 9/8/2010 3:11:46 PM**
**Data Type: Original**

---

**Replicate Data: CCB**

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.082 | 0.082 | 0.002 | 0.014 | 0.004 | | | 15:12:02 | Yes |
| 2 | -0.001 | -0.001 | -0.000 | 0.008 | 0.003 | | | 15:12:38 | Yes |
| 3 | 1.018 | 1.018 | 0.022 | 0.277 | 0.024 | | | 15:13:13 | Yes |
| Mean: | 0.366 | 0.366 | 0.008 | | | | | | |
| SD: | 0.566 | 0.566 | 0.0120 | | | | | | |
| %RSD: | 154.7 | 154.7 | 154.65 | | | | | | |

QC value within limits for Se 196.03 Recovery = Not calculated
All analyte(s) passed QC.

---

**Analysis Begun**

Logged In Analyst: ACQMET10 Technique: AA FIAS-Flame
Spectrometer Model: AAnalyst 200, S/N 200S5061701 Autosampler Model: AS-90

Sample Information File: C:\data-AA\ACQMET10\Sample Information\090810-Se.sif
Batch ID: 090810-Se1
Results Data Set: 090810-Se1
Results Library: R:\ICP\WIP\DATA\K-FLAA-02\Results060614 ENV.mdb

==========

Sequence No.: 39 Autosampler Location:
Sample ID: CCB Date Collected: 9/8/2010 3:18:22 PM
Analyst: Data Type: Original

---

Replicate Data: CCB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.007 | -0.007 | -0.000 | 0.010 | 0.003 | | | 15:18:33 | Yes |
| 2 | -0.011 | -0.011 | -0.000 | 0.010 | 0.002 | | | 15:19:09 | Yes |
| 3 | 0.020 | 0.020 | 0.000 | 0.009 | 0.003 | | | 15:19:45 | Yes |
| Mean: | 0.001 | 0.001 | 0.000 | | | | | | |
| SD: | 0.017 | 0.017 | 0.0004 | | | | | | |
| %RSD: | >999.9% | >999.9% | >999.9% | | | | | | |

==========

Sequence No.: 40 Autosampler Location:
Sample ID: K1009299-002 Date Collected: 9/8/2010 3:20:41 PM
Analyst: Data Type: Original

---

Replicate Data: K1009299-002

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.436 | 0.436 | 0.009 | 0.065 | 0.012 | | | 15:20:52 | Yes |
| 2 | 0.523 | 0.523 | 0.011 | 0.067 | 0.014 | | | 15:21:28 | Yes |
| 3 | 0.530 | 0.530 | 0.011 | 0.063 | 0.014 | | | 15:22:04 | Yes |
| Mean: | 0.496 | 0.496 | 0.011 | | | | | | |
| SD: | 0.052 | 0.052 | 0.0011 | | | | | | |
| %RSD: | 10.47 | 10.47 | 10.47 | | | | | | |

==========

Sequence No.: 41 Autosampler Location:
Sample ID: CCV Date Collected: 9/8/2010 3:23:12 PM
Analyst: Data Type: Original

---

Replicate Data: CCV

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.491 | 7.491 | 0.159 | 0.668 | 0.162 | | | 15:23:24 | Yes |
| 2 | 7.409 | 7.409 | 0.158 | 0.685 | 0.160 | | | 15:23:59 | Yes |
| 3 | 7.633 | 7.633 | 0.162 | 0.680 | 0.165 | | | 15:24:35 | Yes |
| Mean: | 7.511 | 7.511 | 0.160 | | | | | | |
| SD: | 0.113 | 0.113 | 0.0024 | | | | | | |
| %RSD: | 1.509 | 1.509 | 1.51 | | | | | | |

==========

Sequence No.: 42 Autosampler Location:
Sample ID: CCB Date Collected: 9/8/2010 3:26:21 PM
Analyst: Data Type: Original

---

Replicate Data: CCB

| Repl # | SampleConc ug/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Bkgnd Area | Bkgnd Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.099 | 0.099 | 0.002 | 0.023 | 0.005 | | | 15:26:32 | Yes |
| 2 | 0.034 | 0.034 | 0.001 | 0.016 | 0.003 | | | 15:27:08 | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | 0.076 | 0.076 | 0.002 | 0.022 | 0.004 | 15:27:43 | Yes |
| Mean: | 0.070 | 0.070 | 0.001 | | | | |
| SD: | 0.033 | 0.033 | 0.0007 | | | | |
| %RSD: | 46.83 | 46.83 | 46.83 | | | | |

Service Request # K1008857 (water)
Instrument ID# K-ICP-AES-02

# ICP-OES Data Review Form

| | Yes | No |
|---|---|---|
| 1. Standardization completed | ✓ | |
| 2. ICV within 10 % of true value | ✓ | |
| 3. ICB below MRL | ✓ | |
| 4. CRI standard analyzed. | ✓ | |
| 5. ICS standards within 20% of true value | ✓ | |
| 6. All preceding CCVs within 10 % of true value | ✓ | |
| 7. Following CCV within 10 % of true value | ✓ | |
| 8. Bracketing CCBs below MRL | ✓ | |
| 9. Method Blank below MRL | ✓ | |
| 10. MS-MSD or Dup-MS and LCS within CAS control limits | ✓ | |
| 11. All analytes within instrument linear range | ✓ | |
| 12. Adequate rinse out time allowed between samples to eliminate memory effect | ✓ | |

Comments:
File Name: 092110AICP02
Star Lims: 217456

Primary Review by JC Date 9/21/10

Secondary Review by [illegible] Date 9/21/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 09/21/10 08:55 Type: Std Mode: IR Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 |
|---|---|---|---|---|
| Line | 237.312 {141} | 206.833 {162} | 189.042 {177} | 233.527 {144} |
| Avg | .1164 | -.0028 | .0146 | -.00015 |
| Stddev | .0039 | .0118 | .0010 | .00025 |
| %RSD | 3.371 | 424.2 | 6.731 | 162.64 |
| #1 | .1192 | -.0111 | .0139 | .00002 |
| #2 | .1137 | .0055 | .0152 | -.00033 |

| Elem | Be3130 | B_2497 | Cd2265 | Ca2112 |
|---|---|---|---|---|
| Line | 313.042 {107} | 249.773 {134} | 226.502 {148} | 211.276 {159} |
| Avg | -.00296 | .4512 | .0000 | .3909 |
| Stddev | .00017 | .0088 | .000 | .0235 |
| %RSD | 5.8124 | 1.952 | 343.3 | 6.021 |
| #1 | -.00308 | .4450 | -.0001 | .4076 |
| #2 | -.00284 | .4575 | .0000 | .3743 |

| Elem | Ca3179 | Cr2677 | Co2286 | Cu3247 |
|---|---|---|---|---|
| Line | 317.933 {105} | 267.716 {125} | 228.616 {147} | 324.754 {103} |
| Avg | -.1175 | -.0002 | .0002 | -.0235 |
| Stddev | .0175 | .0000 | .0000 | .0215 |
| %RSD | 14.93 | 19.54 | 2.605 | 91.48 |
| #1 | -.1299 | -.0003 | .0002 | -.0387 |
| #2 | -.1051 | -.0002 | .0002 | -.0083 |

| Elem | Fe2599 | Fe2714 | Pb2203 | Mg2025 |
|---|---|---|---|---|
| Line | 259.940 {129} | 271.441 {124} | 220.353 {152} | 202.582 {166} |
| Avg | .0030 | .0003 | .0002 | .0957 |
| Stddev | .0007 | .0000 | .0000 | .0098 |
| %RSD | 23.79 | 6.544 | 12.82 | 10.24 |
| #1 | .0035 | .0003 | .0002 | .0887 |
| #2 | .0025 | .0003 | .0002 | .1026 |

| Elem | Mg2795 | Mn2576 | Mn2939 | Mo2020 |
|---|---|---|---|---|
| Line | 279.553 {120} | 257.610 {131} | 293.930 {114} | 202.030 {166} |
| Avg | .03318 | .00090 | -.0003 | .0003 |
| Stddev | .01956 | .00004 | .0000 | .0001 |
| %RSD | 58.966 | 4.8273 | 10.33 | 25.86 |
| #1 | .01934 | .00093 | -.0003 | .0002 |
| #2 | .04701 | .00087 | -.0003 | .0003 |

| Elem | Ni2316 | K_7664 | Se1960 | Ag3280 |
|---|---|---|---|---|
| Line | 231.604 {145} | 766.490 { 44} | 196.090 {171} | 328.068 {102} |
| Avg | -.0003 | .9110 | .0028 | -.0415 |
| Stddev | .0002 | .0376 | .0118 | .0196 |
| %RSD | 61.72 | 4.126 | 424.2 | 47.18 |
| #1 | -.0002 | .8845 | .0111 | -.0276 |
| #2 | -.0004 | .9376 | -.0055 | -.0553 |

Sample Name: Blank Run Time: 09/21/10 08:55

| Elem | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|
| Line | 589.592 { 57} | 189.989 {176} | 310.230 {108} | 206.200 {163} |
| Avg | .0012 | .0005 | .0075 | .0012 |
| Stddev | .0002 | .0001 | .0000 | .0002 |
| %RSD | 12.51 | 12.89 | .5920 | 20.11 |
| #1 | .0013 | .0006 | .0075 | .0014 |
| #2 | .0011 | .0005 | .0076 | .0011 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 |
|---|---|---|---|---|
| Line | 214.914 {156} | 251.612 {134} | 323.452 {104} | 190.864 {176} |
| Avg | .0250 | .1941 | .00311 | .0002 |
| Stddev | .0157 | .0000 | .00004 | .0001 |
| %RSD | 62.86 | .0036 | 1.4059 | 51.40 |
| #1 | .0360 | .1941 | .00308 | .0001 |
| #2 | .0139 | .1941 | .00314 | .0002 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Line | 670.784 { 50} | 407.771 { 82} |
| Avg | .20454 | .00269 |
| Stddev | .05462 | .00032 |
| %RSD | 26.704 | 12.072 |
| #1 | .24317 | .00246 |
| #2 | .16592 | .00291 |

| Int. Std. | Sc3572 |
|---|---|
| Line | 357.253 { 94} |
| Avg | 181.15 |
| Stddev | .05 |
| %RSD | .02980 |
| #1 | 181.11 |
| #2 | 181.19 |

9/21/10

9/21/10

Method: 2010A Sample Name: STDB ICP7-84-A Operator:
Comment:
Run Time: 09/21/10 08:58 Type: Std Mode: IR Corr.Fact: 1.000000

| Elem | Al2373 | Ba2335 | Be3130 | Ca2112 |
|---|---|---|---|---|
| Line | 237.312 {141} | 233.527 {144} | 313.042 {107} | 211.276 {159} |
| Avg | 17.47 | 2.6224 | .42938 | 32.93 |
| Stddev | .15 | .0113 | .00026 | .23 |
| %RSD | .8312 | .42930 | .06137 | .7124 |
| #1 | 17.37 | 2.6303 | .42920 | 32.77 |
| #2 | 17.58 | 2.6144 | .42957 | 33.10 |

| Elem | Fe2714 | Mg2025 | Mn2939 | K_7664 |
|---|---|---|---|---|
| Line | 271.441 {124} | 202.582 {166} | 293.930 {114} | 766.490 { 44} |
| Avg | .7545 | 50.79 | .6267 | 215.9 |
| Stddev | .0003 | .25 | .0017 | 1.1 |
| %RSD | .0395 | .4952 | .2700 | .5318 |
| #1 | .7547 | 50.61 | .6255 | 216.7 |
| #2 | .7543 | 50.97 | .6279 | 215.1 |

| Elem | Na5895 | P_2149 | Si2516 | Li6707 |
|---|---|---|---|---|
| Line | 589.592 { 57} | 214.914 {156} | 251.612 {134} | 670.784 { 50} |
| Avg | 4.786 | 42.37 | 83.99 | 398.21 |
| Stddev | .046 | .15 | .12 | 1.49 |
| %RSD | .9680 | .3598 | .1413 | .37312 |
| #1 | 4.819 | 42.26 | 83.91 | 399.26 |
| #2 | 4.753 | 42.47 | 84.08 | 397.16 |

| Elem | Sr4077 |
|---|---|
| Line | 407.771 { 82} |
| Avg | 8.5470 |
| Stddev | .0213 |
| %RSD | .24869 |
| #1 | 8.5320 |
| #2 | 8.5621 |

| Int. Std. | Sc3572 |
|---|---|
| Line | 357.253 { 94} |
| Avg | 179.80 |
| Stddev | 1.14 |
| %RSD | .63598 |
| #1 | 178.99 |
| #2 | 180.61 |

Method: 2010A Sample Name: STDA ICPM-100-B Operator:
Comment:
Run Time: 09/21/10 09:01 Type: Std Mode: IR Corr.Fact: 1.000000

| Elem | Sb2068 | As1890 | B_2497 | Cd2265 |
|---|---|---|---|---|
| Line | 206.833 {162} | 189.042 {177} | 249.773 {134} | 226.502 {148} |
| Avg | 14.13 | 10.07 | 43.10 | .2676 |
| Stddev | .05 | .03 | .22 | .0007 |
| %RSD | .3301 | .3225 | .5114 | .2730 |
| #1 | 14.09 | 10.04 | 42.94 | .2681 |
| #2 | 14.16 | 10.09 | 43.25 | .2671 |

| Elem | Ca3179 | Cr2677 | Co2286 | Cu3247 |
|---|---|---|---|---|
| Line | 317.933 {105} | 267.716 {125} | 228.616 {147} | 324.754 {103} |
| Avg | 28.59 | .1132 | .1724 | 17.44 |
| Stddev | .07 | .0009 | .0005 | .06 |
| %RSD | .2544 | .8121 | .2847 | .3564 |
| #1 | 28.64 | .1139 | .1727 | 17.48 |
| #2 | 28.54 | .1126 | .1720 | 17.40 |

| Elem | Fe2599 | Pb2203 | Mg2795 | Mn2576 |
|---|---|---|---|---|
| Line | 259.940 {129} | 220.353 {152} | 279.553 {120} | 257.610 {131} |
| Avg | .3954 | .0806 | 1244.8 | 2.8373 |
| Stddev | .0088 | .0005 | 1.1 | .0235 |
| %RSD | 2.214 | .6616 | .08835 | .82725 |
| #1 | .4016 | .0810 | 1244.0 | 2.8539 |
| #2 | .3892 | .0803 | 1245.5 | 2.8207 |

| Elem | Mo2020 | Ni2316 | Se1960 | Ag3280 |
|---|---|---|---|---|
| Line | 202.030 {166} | 231.604 {145} | 196.090 {171} | 328.068 {102} |
| Avg | .1359 | .1585 | 9.406 | 16.97 |
| Stddev | .0015 | .0003 | .009 | .04 |
| %RSD | 1.086 | .1806 | .0934 | .2112 |
| #1 | .1349 | .1587 | 9.413 | 16.94 |
| #2 | .1370 | .1583 | 9.400 | 16.99 |

| Elem | Sn1899 | V_3102 | Zn2062 | Ti3234 |
|---|---|---|---|---|
| Line | 189.989 {176} | 310.230 {108} | 206.200 {163} | 323.452 {104} |
| Avg | .0746 | .1451 | .1409 | .16863 |
| Stddev | .0001 | .0001 | .0005 | .00128 |
| %RSD | .0764 | .0734 | .3265 | .75643 |
| #1 | .0746 | .1452 | .1406 | .16953 |
| #2 | .0747 | .1451 | .1412 | .16773 |

| Elem | Tl1908 |
|---|---|
| Line | 190.864 {176} |
| Avg | .0705 |
| Stddev | .0004 |
| %RSD | .6197 |
| #1 | .0708 |
| #2 | .0702 |

Sample Name: STDA Run Time: 09/21/10 09:01

| | |
|---|---|
| Int. Std. | Sc3572 |
| Line | 357.253 { 94} |
| Avg | 183.17 |
| Stddev | 1.38 |
| %RSD | .75204 |
| | |
| #1 | 182.20 |
| #2 | 184.15 |

Method: 2010A Sample Name: ICV1 ICP7-92-A Operator:
Comment:
Run Time: 09/21/10 09:05 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.122 | 2.512 | 2.582 | 5.1354 | .12785 | .0015 |
| Stddev | .018 | .003 | .023 | .0108 | .00037 | .0004 |
| %RSD | .3525 | .1300 | .8866 | .21054 | .28788 | 28.04 |
| #1 | 5.135 | 2.515 | 2.566 | 5.1430 | .12759 | .0018 |
| #2 | 5.109 | 2.510 | 2.598 | 5.1277 | .12811 | .0012 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 5.000 | 2.500 | 2.500 | 5.0000 | .12500 | |
| Range | 5.000% | 5.000% | 5.000% | 5.0000% | 5.0000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.264 | 12.74 | .4996 | 1.263 | .6333 | 2.430 |
| Stddev | .002 | .17 | .0011 | .007 | .0036 | .005 |
| %RSD | .1577 | 1.311 | .2180 | .5849 | .5732 | .2016 |
| #1 | 1.263 | 12.62 | .4988 | 1.258 | .6359 | 2.433 |
| #2 | 1.266 | 12.86 | .5003 | 1.268 | .6307 | 2.426 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | 1.250 | 12.50 | .5000 | 1.250 | .6250 | 2.500 |
| Range | 5.000% | 5.000% | 5.000% | 5.000% | 5.000% | 5.000% |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.522 | 12.49 | 1.2343 | 2.032 | 1.248 | 12.91 |
| Stddev | .004 | .02 | .0015 | .011 | .005 | .08 |
| %RSD | .1679 | .1972 | .12180 | .5537 | .3770 | .6056 |
| #1 | 2.525 | 12.47 | 1.2354 | 2.024 | 1.245 | 12.96 |
| #2 | 2.519 | 12.50 | 1.2332 | 2.040 | 1.252 | 12.85 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | 12.50 | 1.2500 | 2.000 | 1.250 | 12.50 |
| Range | 5.000% | 5.000% | 5.0000% | 5.000% | 5.000% | 5.000% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.519 | .6267 | 12.49 | .0074 | 1.259 | 1.255 |
| Stddev | .016 | .0050 | .10 | .0069 | .011 | .009 |
| %RSD | .6198 | .8020 | .8054 | 93.99 | .8665 | .7340 |
| #1 | 2.507 | .6231 | 12.56 | .0123 | 1.251 | 1.248 |
| #2 | 2.530 | .6302 | 12.42 | .0025 | 1.266 | 1.262 |
| Check ? | QC Pass | QC Pass | QC Pass | None | QC Pass | QC Pass |
| Value | 2.500 | .6250 | 12.50 | | 1.250 | 1.250 |
| Range | 5.000% | 5.000% | 5.000% | | 5.000% | 5.000% |

Sample Name: ICV1 Run Time: 09/21/10 09:05

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0008 | -.1491 | 2.0160 | 2.522 | .00059 | .00211 |
| Stddev | .0029 | .0009 | .0044 | .014 | .00068 | .00009 |
| %RSD | 370.2 | .5711 | .21658 | .5573 | 114.97 | 4.1169 |
| #1 | -.0013 | -.1497 | 2.0129 | 2.512 | .00108 | .00217 |
| #2 | .0029 | -.1485 | 2.0191 | 2.532 | .00011 | .00205 |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | 2.0000 | 2.500 | | |
| Range | | | 5.0000% | 5.000% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 183.99 |
| Stddev | .62 |
| %RSD | .33750 |
| #1 | 183.55 |
| #2 | 184.43 |

Method: 2010A Sample Name: ICVB1 ICPM-81-A Operator:
Comment:
Run Time: 09/21/10 09:08 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.024 | .0179 | .0122 | .00371 | .00001 | 2.012 |
| Stddev | .010 | .0092 | .0068 | .00068 | .00001 | .001 |
| %RSD | .9889 | 51.16 | 55.95 | 18.370 | 103.30 | .0523 |
| #1 | 1.031 | .0244 | .0074 | .00419 | .00000 | 2.013 |
| #2 | 1.016 | .0114 | .0171 | .00322 | .00002 | 2.011 |
| Check ? | None | None | None | None | None | QC Pass |
| Value | | | | | | 2.000 |
| Range | | | | | | 5.000% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0011 | 5.122 | .0044 | .0008 | .0005 | 9.983 |
| Stddev | .0006 | .063 | .0002 | .0007 | .0015 | .018 |
| %RSD | 55.06 | 1.231 | 3.857 | 92.34 | 283.6 | .1773 |
| #1 | .0016 | 5.077 | .0045 | .0013 | -.0005 | 9.970 |
| #2 | .0007 | 5.166 | .0042 | .0003 | .0015 | 9.995 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 5.000 | | | | 10.00 |
| Range | | 5.000% | | | | 5.000% |

| Elem | Pb2203 | Mg2795 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0050 | 4.9998 | 9.974 | .0202 | -.0007 | .0146 |
| Stddev | .0075 | .0271 | .043 | .0109 | .0001 | .0257 |
| %RSD | 149.3 | .54274 | .4272 | 54.10 | 15.42 | 175.9 |
| #1 | -.0103 | 4.9806 | 10.00 | .0279 | -.0006 | -.0036 |
| #2 | .0003 | 5.0190 | 9.943 | .0125 | -.0008 | .0328 |
| Check ? | None | QC Pass | QC Pass | None | None | None |
| Value | | 5.0000 | 10.00 | | | |
| Range | | 5.0000% | 5.000% | | | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0132 | .0026 | 7.821 | 4.988 | .0028 | .0006 |
| Stddev | .0010 | .0011 | .104 | .015 | .0009 | .0012 |
| %RSD | 7.903 | 43.77 | 1.334 | .3044 | 33.64 | 188.3 |
| #1 | .0124 | .0018 | 7.895 | 4.999 | .0022 | .0015 |
| #2 | .0139 | .0034 | 7.747 | 4.978 | .0035 | -.0002 |
| Check ? | None | None | None | QC Pass | None | None |
| Value | | | | 5.000 | | |
| Range | | | | 5.000% | | |

Sample Name: ICVB1 Run Time: 09/21/10 09:08

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 4.906 | 5.126 | .00186 | .0155 | 2.0789 | 2.0601 |
| Stddev | .032 | .016 | .00010 | .0162 | .0101 | .0313 |
| %RSD | .6478 | .3131 | 5.4430 | 104.9 | .48395 | 1.5182 |
| | | | | | | |
| #1 | 4.884 | 5.114 | .00179 | .0040 | 2.0860 | 2.0823 |
| #2 | 4.929 | 5.137 | .00193 | .0269 | 2.0718 | 2.0380 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 5.000 | 5.000 | | | 2.0000 | 2.0000 |
| Range | 5.000% | 5.000% | | | 5.0000% | 5.0000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.81 |
| Stddev | 1.51 |
| %RSD | .81534 |
| | |
| #1 | 184.74 |
| #2 | 186.88 |

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 09/21/10 09:11 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0143 | -.0014 | .0045 | .00037 | -.00003 | .0005 |
| Stddev | .0338 | .0172 | .0039 | .00005 | .00004 | .0002 |
| %RSD | 236.0 | 1200. | 87.05 | 14.595 | 136.41 | 27.98 |
| #1 | .0383 | -.0136 | .0072 | .00033 | .00000 | .0007 |
| #2 | -.0096 | .0107 | .0017 | .00041 | -.00006 | .0004 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | -.0005 | .0016 | .0008 | -.0014 | .0008 |
| Stddev | .0004 | .0072 | .0009 | .0013 | .0008 | .0041 |
| %RSD | 60.63 | 1459. | 56.33 | 162.9 | 54.75 | 493.9 |
| #1 | .0010 | -.0055 | .0010 | -.0001 | -.0009 | .0038 |
| #2 | .0004 | .0046 | .0022 | .0018 | -.0020 | -.0021 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0060 | .00005 | .00091 | .0021 | -.0001 | .0036 |
| Stddev | .0056 | .00004 | .00102 | .0013 | .0003 | .0213 |
| %RSD | 94.18 | 70.341 | 112.29 | 63.65 | 261.4 | 585.7 |
| #1 | -.0020 | .00003 | .00163 | .0030 | -.0003 | -.0114 |
| #2 | -.0100 | .00008 | .00019 | .0011 | .0001 | .0187 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0015 | .0005 | .0014 | .0129 | -.0015 | .0001 |
| Stddev | .0167 | .0005 | .0020 | .0034 | .0019 | .0007 |
| %RSD | 1135. | 94.19 | 141.1 | 26.73 | 122.6 | 535.3 |
| #1 | -.0133 | .0002 | .0000 | .0153 | -.0028 | .0006 |
| #2 | .0103 | .0008 | .0029 | .0105 | -.0002 | -.0003 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: ICB Run Time: 09/21/10 09:11

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0018 | -.0028 | .00164 | .0105 | .00017 | .00008 |
| Stddev | .0001 | .0010 | .00083 | .0060 | .00020 | .00004 |
| %RSD | 3.005 | 35.29 | 50.743 | 56.99 | 118.14 | 50.422 |
| #1 | .0019 | -.0021 | .00105 | .0147 | .00003 | .00011 |
| #2 | .0018 | -.0035 | .00223 | .0063 | .00031 | .00005 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 183.00 |
| Stddev | .55 |
| %RSD | .29947 |
| #1 | 183.39 |
| #2 | 182.62 |

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 09:15 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.009 | .0212 | .0076 | 2.4756 | .04954 | .0028 |
| Stddev | .037 | .0077 | .0047 | .0209 | .00013 | .0009 |
| %RSD | .7332 | 36.22 | 62.33 | .84622 | .25748 | 30.42 |
| #1 | 4.962 | .0212 | .0094 | 2.4469 | .04960 | .0028 |
| #2 | 5.021 | .0319 | .0005 | 2.4800 | .04943 | .0037 |
| #3 | 5.049 | .0173 | .0102 | 2.4781 | .04943 | .0017 |
| #4 | 5.005 | .0144 | .0102 | 2.4973 | .04968 | .0030 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 5.000% | | | 5.0000% | 5.0000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0026 | 25.71 | .0033 | .0000 | -.0005 | 24.93 |
| Stddev | .0007 | .27 | .0009 | .001 | .0011 | .16 |
| %RSD | 25.88 | 1.047 | 25.68 | 22570. | 214.7 | .6348 |
| #1 | .0027 | 25.33 | .0036 | -.0004 | -.0012 | 24.71 |
| #2 | .0034 | 25.91 | .0043 | .0005 | -.0015 | 24.95 |
| #3 | .0025 | 25.72 | .0022 | .0013 | .0011 | 24.95 |
| #4 | .0018 | 25.90 | .0032 | -.0013 | -.0005 | 25.10 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 5.000% | | | | 5.000% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0077 | 25.01 | 4.966 | .0005 | -.0015 | 10.08 |
| Stddev | .0091 | .10 | .010 | .0005 | .0005 | .02 |
| %RSD | 117.2 | .4154 | .2028 | 110.6 | 34.17 | .1701 |
| #1 | -.0206 | 24.87 | 4.956 | .0005 | -.0014 | 10.07 |
| #2 | -.0066 | 25.06 | 4.973 | .0011 | -.0021 | 10.09 |
| #3 | -.0042 | 25.01 | 4.958 | -.0002 | -.0016 | 10.10 |
| #4 | .0005 | 25.11 | 4.976 | .0006 | -.0009 | 10.06 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 5.000% | 5.000% | | | 5.000% |

Sample Name: CCVB Run Time: 09/21/10 09:15

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0014 | .0008 | 9.673 | .0047 | .0067 | .0016 |
| Stddev | .0105 | .0005 | .026 | .0082 | .0012 | .0004 |
| %RSD | 738.3 | 56.74 | .2704 | 175.5 | 17.38 | 27.11 |
| #1 | .0018 | .0011 | 9.686 | .0041 | .0058 | .0013 |
| #2 | .0121 | .0008 | 9.648 | .0091 | .0081 | .0013 |
| #3 | -.0129 | .0002 | 9.703 | .0122 | .0071 | .0014 |
| #4 | .0047 | .0011 | 9.654 | -.0066 | .0056 | .0022 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 5.000% | | | |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 10.04 | 2.513 | .00264 | .0158 | .50123 | .49938 |
| Stddev | .07 | .005 | .00175 | .0179 | .00050 | .00094 |
| %RSD | .6811 | .1890 | 66.314 | 113.7 | .10050 | .18875 |
| #1 | 9.999 | 2.512 | .00028 | -.0106 | .50116 | .50011 |
| #2 | 10.01 | 2.513 | .00315 | .0259 | .50193 | .49978 |
| #3 | 9.999 | 2.509 | .00266 | .0281 | .50073 | .49800 |
| #4 | 10.14 | 2.520 | .00449 | .0196 | .50110 | .49962 |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 5.000% | 5.000% | | | 5.0000% | 5.0000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 183.77 |
| Stddev | .26 |
| %RSD | .14338 |
| #1 | 183.74 |
| #2 | 184.15 |
| #3 | 183.63 |
| #4 | 183.56 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 09:20 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0117 | 2.471 | 2.434 | .00127 | -.00044 | .4969 |
| Stddev | .0148 | .017 | .009 | .00036 | .00009 | .0007 |
| %RSD | 127.0 | .6694 | .3736 | 28.526 | 19.726 | .1402 |
| #1 | -.0019 | 2.474 | 2.429 | .00179 | -.00034 | .4966 |
| #2 | .0237 | 2.448 | 2.425 | .00100 | -.00041 | .4961 |
| #3 | .0252 | 2.486 | 2.446 | .00106 | -.00055 | .4978 |
| #4 | -.0004 | 2.477 | 2.435 | .00122 | -.00046 | .4968 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 5.000% | 5.000% | | | 5.000% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4934 | 2.457 | .4936 | .4963 | .4880 | .4903 |
| Stddev | .0042 | .017 | .0021 | .0031 | .0006 | .0025 |
| %RSD | .8504 | .7036 | .4194 | .6186 | .1272 | .5136 |
| #1 | .4901 | 2.434 | .4950 | .4961 | .4871 | .4930 |
| #2 | .4990 | 2.460 | .4945 | .5001 | .4880 | .4917 |
| #3 | .4942 | 2.476 | .4944 | .4962 | .4885 | .4888 |
| #4 | .4904 | 2.459 | .4905 | .4926 | .4882 | .4875 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 5.000% | 5.000% | 5.000% | 5.000% | 5.000% | 5.000% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.453 | 1.9793 | .98791 | .9854 | .4966 | .0212 |
| Stddev | .002 | .0035 | .00580 | .0082 | .0027 | .0136 |
| %RSD | .0997 | .17580 | .58664 | .8332 | .5413 | 64.04 |
| #1 | 2.452 | 1.9797 | .98513 | .9770 | .4967 | .0219 |
| #2 | 2.450 | 1.9743 | .99488 | .9900 | .4988 | .0158 |
| #3 | 2.454 | 1.9818 | .99003 | .9944 | .4980 | .0395 |
| #4 | 2.455 | 1.9814 | .98159 | .9800 | .4927 | .0075 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 5.000% | 5.0000% | 5.0000% | 5.000% | 5.000% | |

Sample Name: CCVA Run Time: 09/21/10 09:20

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.441 | .4908 | .0085 | 2.444 | .4849 | .4935 |
| Stddev | .016 | .0029 | .0028 | .016 | .0036 | .0029 |
| %RSD | .6548 | .5925 | 32.85 | .6708 | .7516 | .5909 |
| #1 | 2.418 | .4905 | .0105 | 2.425 | .4835 | .4924 |
| #2 | 2.453 | .4888 | .0109 | 2.453 | .4886 | .4958 |
| #3 | 2.447 | .4888 | .0079 | 2.462 | .4872 | .4960 |
| #4 | 2.448 | .4950 | .0048 | 2.438 | .4805 | .4899 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 5.000% | 5.000% | | 5.000% | 5.000% | 5.000% |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0111 | .0584 | .49024 | 4.861 | .00038 | .00054 |
| Stddev | .0120 | .0043 | .00310 | .029 | .00012 | .00002 |
| %RSD | 108.3 | 7.434 | .63315 | .5859 | 31.541 | 4.4328 |
| #1 | -.0222 | .0586 | .48639 | 4.840 | .00050 | .00056 |
| #2 | -.0071 | .0604 | .49372 | 4.898 | .00027 | .00055 |
| #3 | -.0189 | .0522 | .49140 | 4.868 | .00029 | .00054 |
| #4 | .0040 | .0622 | .48944 | 4.837 | .00045 | .00051 |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 5.0000% | 5.000% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.19 |
| Stddev | 1.05 |
| %RSD | .56586 |
| #1 | 185.41 |
| #2 | 183.76 |
| #3 | 185.32 |
| #4 | 186.28 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 09:25 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0208 | -.0063 | .0076 | .00048 | -.00002 | -.0002 |
| Stddev | .0226 | .0033 | .0024 | .00025 | .00008 | .0005 |
| %RSD | 108.7 | 53.55 | 32.22 | 53.396 | 389.04 | 190.1 |
| #1 | .0367 | -.0086 | .0059 | .00030 | .00003 | -.0006 |
| #2 | .0048 | -.0039 | .0093 | .00066 | -.00007 | .0001 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0006 | .0041 | .0022 | .0006 | -.0014 | -.0022 |
| Stddev | .0002 | .0048 | .0005 | .0001 | .0001 | .0007 |
| %RSD | 36.56 | 116.5 | 21.90 | 11.91 | 7.672 | 33.52 |
| #1 | .0007 | .0075 | .0018 | .0007 | -.0013 | -.0017 |
| #2 | .0004 | .0007 | .0025 | .0006 | -.0015 | -.0027 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0069 | .00012 | .00029 | .0057 | .0004 | .0013 |
| Stddev | .0064 | .00003 | .00024 | .0052 | .0006 | .0224 |
| %RSD | 92.23 | 26.287 | 82.640 | 91.31 | 142.6 | 1693. |
| #1 | -.0024 | .00014 | .00046 | .0093 | .0008 | .0172 |
| #2 | -.0114 | .00010 | .00012 | .0020 | .0000 | -.0145 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0015 | .0023 | -.0004 | .0007 | .0025 | -.0008 |
| Stddev | .0042 | .0016 | .0061 | .0063 | .0002 | .0007 |
| %RSD | 282.5 | 70.82 | 1511. | 888.2 | 6.310 | 87.12 |
| #1 | -.0015 | .0034 | .0039 | -.0038 | .0026 | -.0013 |
| #2 | .0044 | .0011 | -.0047 | .0052 | .0024 | -.0003 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 09:25

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0133 | -.0016 | .00240 | -.0045 | .00052 | .00003 |
| Stddev | .0153 | .0021 | .00040 | .0030 | .00009 | .00004 |
| %RSD | 114.9 | 136.4 | 16.669 | 65.28 | 17.885 | 128.36 |
| #1 | .0241 | -.0031 | .00212 | -.0066 | .00059 | .00000 |
| #2 | .0025 | -.0001 | .00269 | -.0024 | .00046 | .00007 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 182.73 |
| Stddev | .91 |
| %RSD | .50009 |
| #1 | 182.08 |
| #2 | 183.37 |

Method: 2010A Sample Name: CRI ICP8-1-B Operator:
Comment:
Run Time: 09/21/10 09:28 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0647 | .0489 | .0803 | .00498 | .00458 | .0494 |
| Stddev | .0056 | .0014 | .0039 | .00025 | .00002 | .0005 |
| %RSD | 8.628 | 2.926 | 4.808 | 4.9863 | .41514 | .9234 |
| #1 | .0608 | .0499 | .0776 | .00515 | .00459 | .0491 |
| #2 | .0687 | .0479 | .0831 | .00480 | .00457 | .0497 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0500 | .0500 | .1000 | .00500 | .00500 | .0500 |
| Range | 30.00% | 100.0% | 100.0% | 100.00% | 100.00% | 100.0% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0055 | .0378 | .0061 | .0100 | .0083 | .0182 |
| Stddev | .0000 | .0048 | .0001 | .0000 | .0005 | .0003 |
| %RSD | .6707 | 12.61 | 1.048 | .1503 | 5.444 | 1.895 |
| #1 | .0055 | .0344 | .0061 | .0100 | .0086 | .0185 |
| #2 | .0056 | .0412 | .0060 | .0100 | .0080 | .0180 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0050 | .0500 | .0050 | .0100 | .0100 | .0200 |
| Range | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0517 | .01632 | .00455 | .0085 | .0191 | .4240 |
| Stddev | .0052 | .00026 | .00009 | .0016 | .0006 | .0168 |
| %RSD | 9.960 | 1.5712 | 1.9875 | 18.82 | 2.971 | 3.955 |
| #1 | .0554 | .01613 | .00449 | .0096 | .0195 | .4359 |
| #2 | .0481 | .01650 | .00462 | .0074 | .0187 | .4121 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0500 | .02000 | .00500 | .0100 | .0200 | .4000 |
| Range | 100.0% | 100.00% | 100.00% | 100.0% | 100.0% | 100.0% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0708 | .0117 | .1897 | .0357 | .0097 | .0086 |
| Stddev | .0084 | .0021 | .0020 | .0026 | .0059 | .0001 |
| %RSD | 11.82 | 17.67 | 1.062 | 7.164 | 60.91 | 1.251 |
| #1 | .0767 | .0102 | .1883 | .0339 | .0138 | .0087 |
| #2 | .0648 | .0132 | .1911 | .0375 | .0055 | .0086 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .1000 | .0100 | .2000 | .0500 | .0100 | .0100 |
| Range | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Sample Name: CRI Run Time: 09/21/10 09:28

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1843 | .4109 | .01053 | .1529 | .01037 | .00913 |
| Stddev | .0117 | .0031 | .00027 | .0202 | .00052 | .00005 |
| %RSD | 6.350 | .7598 | 2.6027 | 13.20 | 5.0279 | .55768 |
| | | | | | | |
| #1 | .1926 | .4131 | .01034 | .1671 | .01074 | .00917 |
| #2 | .1760 | .4087 | .01072 | .1386 | .01000 | .00910 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .2000 | .4000 | .01000 | .2000 | .01000 | .01000 |
| Range | 100.0% | 100.0% | 100.00% | 100.0% | 100.00% | 100.00% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.17 |
| Stddev | .66 |
| %RSD | .35597 |
| | |
| #1 | 185.70 |
| #2 | 186.64 |

Method: 2010A Sample Name: ICSA ICP7-83-C Operator:
Comment:
Run Time: 09/21/10 09:31 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 503.2 | .0673 | .0135 | -.00041 | .00003 | -.0162 |
| Stddev | .9 | .0166 | .0036 | .00043 | .00006 | .0003 |
| %RSD | .1730 | 24.66 | 26.71 | 103.38 | 240.89 | 1.568 |
| #1 | 503.8 | .0791 | .0160 | -.00011 | .00007 | -.0160 |
| #2 | 502.6 | .0556 | .0109 | -.00072 | -.00002 | -.0164 |
| Check ? | QC Pass | None | None | None | None | None |
| Value | 500.0 | | | | | |
| Range | 20.00% | | | | | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0118 | 495.2 | -.0006 | .0009 | -.0006 | 198.0 |
| Stddev | .0000 | 2.4 | .0006 | .0018 | .0007 | .2 |
| %RSD | .3828 | .4851 | 110.8 | 202.2 | 120.8 | .0871 |
| #1 | .0118 | 493.5 | -.0010 | -.0004 | -.0001 | 197.9 |
| #2 | .0118 | 496.8 | -.0001 | .0022 | -.0010 | 198.1 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 500.0 | | | | 200.0 |
| Range | | 20.00% | | | | 20.00% |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0010 | 509.0 | .00356 | .0032 | -.0037 | -.0325 |
| Stddev | .0161 | 3.1 | .00036 | .0028 | .0012 | .0186 |
| %RSD | 1536. | .6155 | 10.120 | 86.09 | 31.65 | 57.10 |
| #1 | .0103 | 506.8 | .00331 | .0052 | -.0029 | -.0456 |
| #2 | -.0124 | 511.2 | .00382 | .0013 | -.0045 | -.0194 |
| Check ? | None | QC Pass | None | None | None | None |
| Value | | 500.0 | | | | |
| Range | | 20.00% | | | | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0163 | .0015 | .0280 | -.0247 | .0016 | .0047 |
| Stddev | .0094 | .0005 | .0041 | .0020 | .0003 | .0010 |
| %RSD | 57.81 | 31.58 | 14.83 | 7.886 | 21.32 | 21.39 |
| #1 | .0229 | .0011 | .0250 | -.0261 | .0018 | .0040 |
| #2 | .0096 | .0018 | .0309 | -.0234 | .0013 | .0054 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

Sample Name: ICSA Run Time: 09/21/10 09:31

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0187 | -.0232 | .01463 | .1060 | .01218 | -.01917 |
| Stddev | .0207 | .0045 | .00107 | .0097 | .00016 | .00040 |
| %RSD | 110.5 | 19.19 | 7.3479 | 9.158 | 1.3009 | 2.0661 |
| #1 | .0333 | -.0201 | .01539 | .1129 | .01207 | -.01889 |
| #2 | .0041 | -.0263 | .01387 | .0992 | .01230 | -.01946 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 169.46 |
| Stddev | .52 |
| %RSD | .30409 |
| #1 | 169.10 |
| #2 | 169.83 |

Method: 2010A Sample Name: ICSAB ICP17-92-B Operator:
Comment:
Run Time: 09/21/10 09:34 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 501.0 | 1.040 | -.0100 | .47220 | .55118 | -.0152 |
| Stddev | .1 | .001 | .0059 | .00182 | .00058 | .0014 |
| %RSD | .0236 | .1275 | 58.87 | .38539 | .10479 | 9.254 |
| #1 | 501.1 | 1.039 | -.0058 | .47091 | .55077 | -.0142 |
| #2 | 500.9 | 1.041 | -.0141 | .47348 | .55158 | -.0162 |
| Check ? | None | QC Pass | None | QC Pass | QC Pass | None |
| Value | | 1.000 | | .50000 | .50000 | |
| Range | | 20.00% | | 20.000% | 20.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9783 | 489.8 | .4807 | .4861 | .4765 | 195.9 |
| Stddev | .0053 | 2.4 | .0047 | .0033 | .0025 | .1 |
| %RSD | .5400 | .4986 | .9856 | .6746 | .5191 | .0432 |
| #1 | .9746 | 488.1 | .4774 | .4838 | .4783 | 195.8 |
| #2 | .9820 | 491.5 | .4841 | .4884 | .4748 | 195.9 |
| Check ? | QC Pass | None | QC Pass | QC Pass | QC Pass | None |
| Value | 1.000 | | .5000 | .5000 | .5000 | |
| Range | 20.00% | | 20.00% | 20.00% | 20.00% | |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9850 | 506.3 | .46004 | -.0013 | .9468 | -.0411 |
| Stddev | .0152 | .2 | .00138 | .0017 | .0019 | .0060 |
| %RSD | 1.540 | .0421 | .30067 | 129.5 | .1967 | 14.58 |
| #1 | .9743 | 506.5 | .45906 | -.0001 | .9455 | -.0454 |
| #2 | .9957 | 506.2 | .46102 | -.0025 | .9481 | -.0369 |
| Check ? | QC Pass | None | QC Pass | None | QC Pass | None |
| Value | 1.000 | | .50000 | | 1.000 | |
| Range | 20.00% | | 20.000% | | 20.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0294 | .9682 | .0255 | -.0129 | .5001 | .9479 |
| Stddev | .0167 | .0101 | .0012 | .0054 | .0015 | .0056 |
| %RSD | 56.69 | 1.041 | 4.590 | 41.85 | .3034 | .5890 |
| #1 | .0176 | .9610 | .0263 | -.0167 | .5011 | .9440 |
| #2 | .0412 | .9753 | .0246 | -.0091 | .4990 | .9519 |
| Check ? | None | QC Pass | None | None | QC Pass | QC Pass |
| Value | | 1.000 | | | .5000 | 1.000 |
| Range | | 20.00% | | | 20.00% | 20.00% |

Sample Name: ICSAB Run Time: 09/21/10 09:34

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0168 | -.0166 | .01443 | .1328 | .01170 | -.01777 |
| Stddev | .0099 | .0012 | .00035 | .0047 | .00032 | .00031 |
| %RSD | 58.87 | 7.012 | 2.3908 | 3.554 | 2.7667 | 1.7594 |
| | | | | | | |
| #1 | -.0239 | -.0174 | .01419 | .1294 | .01148 | -.01755 |
| #2 | -.0098 | -.0157 | .01468 | .1361 | .01193 | -.01799 |
| | | | | | | |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 170.36 |
| Stddev | .36 |
| %RSD | .21068 |
| | |
| #1 | 170.10 |
| #2 | 170.61 |

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 09/21/10 09:37 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 501.5 | 1.059 | -.0168 | .47267 | .55158 | -.0155 |
| Stddev | 1.0 | .021 | .0177 | .00251 | .00123 | .0005 |
| %RSD | .2045 | 2.011 | 105.9 | .53110 | .22343 | 3.523 |
| #1 | 500.8 | 1.044 | -.0293 | .47089 | .55070 | -.0151 |
| #2 | 502.2 | 1.074 | -.0042 | .47444 | .55245 | -.0159 |
| Check ? | None | QC Pass | None | QC Pass | QC Pass | None |
| Value | | 1.000 | | .50000 | .50000 | |
| Range | | 20.00% | | 20.000% | 20.000% | |

SC 9/21/10

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9792 | 491.4 | .4801 | .4856 | .4820 | 196.3 |
| Stddev | .0078 | 2.6 | .0055 | .0021 | .0041 | .9 |
| %RSD | .8015 | .5266 | 1.136 | .4332 | .8404 | .4690 |
| #1 | .9737 | 489.6 | .4763 | .4842 | .4791 | 195.6 |
| #2 | .9848 | 493.2 | .4840 | .4871 | .4848 | 196.9 |
| Check ? | QC Pass | None | QC Pass | QC Pass | QC Pass | None |
| Value | 1.000 | | .5000 | .5000 | .5000 | |
| Range | 20.00% | | 20.00% | 20.00% | 20.00% | |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.000 | 507.0 | .46127 | .0001 | .9485 | -.0453 |
| Stddev | .005 | 1.0 | .00383 | .0003 | .0042 | .0115 |
| %RSD | .4621 | .1971 | .82923 | 219.7 | .4439 | 25.31 |
| #1 | 1.004 | 506.2 | .45857 | .0004 | .9456 | -.0534 |
| #2 | .9971 | 507.7 | .46398 | -.0001 | .9515 | -.0372 |
| Check ? | QC Pass | None | QC Pass | None | QC Pass | None |
| Value | 1.000 | | .50000 | | 1.000 | |
| Range | 20.00% | | 20.000% | | 20.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0273 | .9693 | .0264 | -.0181 | .4996 | .9559 |
| Stddev | .0116 | .0009 | .0013 | .0261 | .0020 | .0089 |
| %RSD | 42.49 | .0948 | 5.009 | 144.2 | .4081 | .9282 |
| #1 | .0191 | .9686 | .0274 | -.0365 | .4982 | .9496 |
| #2 | .0354 | .9699 | .0255 | .0004 | .5010 | .9622 |
| Check ? | None | QC Pass | None | None | QC Pass | QC Pass |
| Value | | 1.000 | | | .5000 | 1.000 |
| Range | | 20.00% | | | 20.00% | 20.00% |

Sample Name: ICSAB Run Time: 09/21/10 09:37

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0303 | -.0176 | .01428 | .1296 | .01234 | -.01814 |
| Stddev | .0154 | .0094 | .00271 | .0266 | .00014 | .00022 |
| %RSD | 50.80 | 53.51 | 18.979 | 20.54 | 1.1552 | 1.2101 |
| #1 | .0194 | -.0242 | .01236 | .1107 | .01223 | -.01798 |
| #2 | .0412 | -.0109 | .01619 | .1484 | .01244 | -.01829 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 170.19 |
| Stddev | .37 |
| %RSD | .21693 |
| #1 | 170.45 |
| #2 | 169.93 |

SC
9/21/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 09:40 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.086 | .0080 | .0022 | 2.4612 | .04913 | .0013 |
| Stddev | .041 | .0034 | .0034 | .0133 | .00035 | .0004 |
| %RSD | .8025 | 42.67 | 153.1 | .54176 | .71376 | 26.28 |
| #1 | 5.115 | .0056 | -.0002 | 2.4707 | .04938 | .0011 |
| #2 | 5.057 | .0105 | .0046 | 2.4518 | .04888 | .0016 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 10.00% | | | 10.000% | 10.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0022 | 25.78 | .0023 | -.0007 | -.0031 | 24.72 |
| Stddev | .0001 | .01 | .0008 | .0001 | .0010 | .11 |
| %RSD | 4.363 | .0325 | 34.68 | 8.094 | 32.06 | .4520 |
| #1 | .0021 | 25.78 | .0017 | -.0008 | -.0024 | 24.80 |
| #2 | .0023 | 25.79 | .0028 | -.0007 | -.0039 | 24.65 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 10.00% | | | | 10.00% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0080 | 25.17 | 4.899 | .0005 | -.0028 | 10.13 |
| Stddev | .0052 | .03 | .007 | .0006 | .0015 | .03 |
| %RSD | 65.60 | .1049 | .1460 | 123.5 | 52.98 | .2882 |
| #1 | -.0117 | 25.15 | 4.894 | .0010 | -.0039 | 10.15 |
| #2 | -.0043 | 25.19 | 4.904 | .0001 | -.0018 | 10.11 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0150 | .0013 | 9.709 | .0025 | .0022 | .0019 |
| Stddev | .0104 | .0021 | .067 | .0102 | .0001 | .0001 |
| %RSD | 69.19 | 159.4 | .6866 | 416.2 | 6.090 | 4.409 |
| #1 | .0077 | .0028 | 9.757 | -.0048 | .0021 | .0018 |
| #2 | .0224 | -.0002 | 9.662 | .0097 | .0023 | .0020 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 10.00% | | | |

Sample Name: CCVB Run Time: 09/21/10 09:40

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 10.11 | 2.518 | .00371 | .0128 | .50665 | .49300 |
| Stddev | .04 | .008 | .00146 | .0061 | .00278 | .00240 |
| %RSD | .4320 | .3052 | 39.342 | 47.74 | .54863 | .48731 |
| #1 | 10.08 | 2.513 | .00268 | .0171 | .50862 | .49470 |
| #2 | 10.14 | 2.524 | .00475 | .0085 | .50469 | .49130 |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 10.00% | 10.00% | | | 10.000% | 10.000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.36 |
| Stddev | .51 |
| %RSD | .27630 |
| #1 | 185.00 |
| #2 | 185.73 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 09:43 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0236 | 2.448 | 2.409 | .00133 | -.00038 | .4949 |
| Stddev | .0158 | .007 | .032 | .00015 | .00001 | .0017 |
| %RSD | 67.04 | .3011 | 1.341 | 11.399 | 1.5759 | .3526 |
| #1 | .0124 | 2.443 | 2.386 | .00122 | -.00038 | .4936 |
| #2 | .0348 | 2.453 | 2.431 | .00143 | -.00037 | .4961 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4897 | 2.435 | .4920 | .4926 | .4787 | .4979 |
| Stddev | .0027 | .035 | .0039 | .0034 | .0041 | .0049 |
| %RSD | .5561 | 1.440 | .7896 | .6841 | .8499 | .9859 |
| #1 | .4878 | 2.410 | .4893 | .4902 | .4816 | .5013 |
| #2 | .4916 | 2.460 | .4948 | .4950 | .4759 | .4944 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.441 | 1.9711 | .98333 | .9767 | .4935 | .0034 |
| Stddev | .017 | .0109 | .00365 | .0101 | .0011 | .0185 |
| %RSD | .6893 | .55466 | .37095 | 1.030 | .2200 | 535.8 |
| #1 | 2.429 | 1.9634 | .98075 | .9695 | .4928 | .0165 |
| #2 | 2.453 | 1.9789 | .98591 | .9838 | .4943 | -.0096 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.423 | .4899 | .0071 | 2.432 | .4817 | .4902 |
| Stddev | .026 | .0106 | .0020 | .006 | .0002 | .0081 |
| %RSD | 1.090 | 2.154 | 27.63 | .2647 | .0485 | 1.653 |
| #1 | 2.441 | .4825 | .0085 | 2.427 | .4818 | .4845 |
| #2 | 2.404 | .4974 | .0057 | 2.437 | .4815 | .4959 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Sample Name: CCVA Run Time: 09/21/10 09:43

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0150 | .0620 | .48723 | 4.810 | .00059 | .00058 |
| Stddev | .0105 | .0009 | .00093 | .039 | .00006 | .00003 |
| %RSD | 70.08 | 1.406 | .19185 | .8098 | 9.3840 | 5.6897 |
| | | | | | | |
| #1 | -.0076 | .0626 | .48657 | 4.782 | .00063 | .00056 |
| #2 | -.0225 | .0613 | .48789 | 4.837 | .00055 | .00060 |
| | | | | | | |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.35 |
| Stddev | .27 |
| %RSD | .14311 |
| | |
| #1 | 185.17 |
| #2 | 185.54 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 09:46 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0120 | .0108 | .0086 | .00018 | .00009 | -.0004 |
| Stddev | .0057 | .0110 | .0029 | .00008 | .00004 | .0006 |
| %RSD | 47.29 | 101.4 | 33.92 | 44.430 | 46.517 | 145.5 |
| #1 | .0160 | .0031 | .0066 | .00023 | .00012 | -.0008 |
| #2 | .0080 | .0186 | .0107 | .00012 | .00006 | .0000 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0012 | .0015 | .0012 | .0008 | .0003 | .0017 |
| Stddev | .0000 | .0017 | .0007 | .0000 | .0001 | .0000 |
| %RSD | 1.476 | 116.7 | 53.52 | .6708 | 35.95 | .8267 |
| #1 | .0012 | .0003 | .0008 | .0008 | .0002 | .0016 |
| #2 | .0012 | .0026 | .0017 | .0008 | .0004 | .0017 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0030 | .00069 | .00071 | .0052 | -.0011 | .0126 |
| Stddev | .0046 | .00003 | .00002 | .0033 | .0013 | .0162 |
| %RSD | 154.3 | 4.6161 | 2.3537 | 63.61 | 123.6 | 129.0 |
| #1 | -.0062 | .00067 | .00072 | .0075 | -.0001 | .0011 |
| #2 | .0003 | .00071 | .00070 | .0029 | -.0020 | .0240 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0059 | -.0002 | -.0047 | .0032 | .0004 | -.0009 |
| Stddev | .0083 | .0005 | .0020 | .0017 | .0014 | .0009 |
| %RSD | 141.5 | 286.8 | 42.43 | 55.08 | 349.6 | 105.9 |
| #1 | .0118 | -.0005 | -.0033 | .0019 | -.0006 | -.0016 |
| #2 | .0000 | .0002 | -.0061 | .0044 | .0013 | -.0002 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 09:46

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0098 | -.0053 | .00055 | .0102 | .00019 | .00011 |
| Stddev | .0157 | .0017 | .00076 | .0031 | .00014 | .00001 |
| %RSD | 160.0 | 32.56 | 137.25 | 29.92 | 73.207 | 9.2626 |
| | | | | | | |
| #1 | .0209 | -.0065 | .00002 | .0124 | .00028 | .00012 |
| #2 | -.0013 | -.0041 | .00109 | .0081 | .00009 | .00010 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 184.55 |
| Stddev | .18 |
| %RSD | .09810 |
| | |
| #1 | 184.42 |
| #2 | 184.68 |

Method: 2010A Sample Name: K1009548-MB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 09:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0239 | .0102 | .0028 | .00050 | .00004 | -.0001 |
| #1 | .0175 | .0137 | -.0017 | .00061 | .00011 | .0005 |
| #2 | .0303 | .0068 | .0072 | .00038 | -.00003 | -.0006 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0002 | .0020 | .0022 | -.0001 | .0004 | .0003 |
| #1 | .0000 | -.0016 | .0018 | -.0001 | .0001 | .0005 |
| #2 | .0004 | .0056 | .0027 | -.0002 | .0007 | .0000 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0116 | .00023 | .00004 | -.0004 | .0008 | .0239 |
| #1 | -.0188 | .00019 | .00003 | .0007 | -.0001 | .0144 |
| #2 | -.0044 | .00027 | .00005 | -.0015 | .0018 | .0333 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0103 | .0026 | .0042 | .0049 | -.0009 | -.0002 |
| #1 | .0088 | -.0005 | .0048 | .0087 | -.0036 | -.0010 |
| #2 | .0118 | .0057 | .0036 | .0012 | .0018 | .0006 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1885 | -.0026 | .00120 | .0047 | .00022 | -.00001 |
| #1 | .1891 | -.0029 | .00129 | .0121 | .00023 | -.00004 |
| #2 | .1879 | -.0022 | .00112 | -.0027 | .00021 | .00001 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.79 |
| #1 | 185.86 |
| #2 | 185.72 |

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1009548 (217456) (092110A)
Run Time: 09/21/10 09:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.028 | 2.458 | 2.563 | 5.0266 | .12472 | .9338 |
| #1 | 4.986 | 2.451 | 2.538 | 5.0171 | .12479 | .9317 |
| #2 | 5.071 | 2.466 | 2.588 | 5.0361 | .12465 | .9359 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.244 | 12.64 | .4908 | 1.239 | .6223 | 2.386 |
| #1 | 1.240 | 12.50 | .4922 | 1.235 | .6182 | 2.383 |
| #2 | 1.248 | 12.77 | .4894 | 1.243 | .6264 | 2.388 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.458 | 12.42 | 1.2152 | .9317 | 1.225 | 12.91 |
| #1 | 2.457 | 12.38 | 1.2174 | .9211 | 1.222 | 12.86 |
| #2 | 2.459 | 12.46 | 1.2130 | .9424 | 1.228 | 12.95 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.493 | .6091 | 12.45 | .0068 | 1.231 | 1.221 |
| #1 | 2.484 | .6113 | 12.47 | .0034 | 1.237 | 1.218 |
| #2 | 2.502 | .6069 | 12.44 | .0103 | 1.225 | 1.225 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1457 | .0008 | .00372 | 2.462 | .00056 | .00197 |
| #1 | .1428 | .0015 | .00278 | 2.459 | .00035 | .00191 |
| #2 | .1486 | .0001 | .00467 | 2.464 | .00076 | .00202 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 184.59 |
| #1 | 184.21 |
| #2 | 184.97 |

Method: 2010A Sample Name: K1009548-001 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 09:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1689 | .0189 | .0107 | .03034 | .00001 | .3358 |
| #1 | .1458 | .0219 | .0086 | .03108 | .00007 | .3357 |
| #2 | .1920 | .0159 | .0128 | .02961 | -.00005 | .3359 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0021 | 28.01 | .0124 | .0022 | -.0019 | 32.23 |
| #1 | .0019 | 27.79 | .0134 | .0027 | -.0002 | 32.28 |
| #2 | .0022 | 28.23 | .0113 | .0018 | -.0035 | 32.17 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0134 | 14.56 | 1.9085 | .0092 | -.0009 | 20.31 |
| #1 | -.0174 | 14.54 | 1.9167 | .0133 | -.0020 | 20.39 |
| #2 | -.0095 | 14.57 | 1.9003 | .0051 | .0002 | 20.23 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0130 | .0011 | 161.9 | .0043 | .0315 | .1051 |
| #1 | .0152 | .0030 | 162.9 | .0029 | .0325 | .1046 |
| #2 | .0108 | -.0009 | 160.8 | .0057 | .0305 | .1055 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.727 | 25.86 | .06443 | .0414 | .00580 | .17581 |
| #1 | 2.706 | 25.83 | .06429 | .0608 | .00592 | .17626 |
| #2 | 2.748 | 25.88 | .06457 | .0219 | .00569 | .17536 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 184.42 |
| #1 | 183.72 |
| #2 | 185.12 |

Method: 2010A Sample Name: K1009548-001D Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 09:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1341 | .0056 | .0085 | .02887 | .00007 | .3279 |
| #1 | .1165 | .0022 | .0126 | .02830 | .00006 | .3277 |
| #2 | .1516 | .0090 | .0043 | .02944 | .00007 | .3282 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0027 | 27.13 | .0124 | .0012 | -.0025 | 30.94 |
| #1 | .0027 | 27.13 | .0127 | .0016 | -.0028 | 31.02 |
| #2 | .0027 | 27.12 | .0121 | .0008 | -.0023 | 30.87 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0113 | 14.06 | 1.8462 | .0049 | .0002 | 20.02 |
| #1 | -.0062 | 14.06 | 1.8398 | .0051 | -.0004 | 20.08 |
| #2 | -.0164 | 14.07 | 1.8525 | .0047 | .0009 | 19.97 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0159 | .0035 | 158.7 | .0152 | .0284 | .0990 |
| #1 | .0019 | .0063 | 159.3 | .0103 | .0253 | .0993 |
| #2 | .0298 | .0008 | 158.0 | .0202 | .0315 | .0987 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.650 | 25.04 | .06406 | .0493 | .00580 | .16872 |
| #1 | 2.645 | 25.07 | .06208 | .0538 | .00583 | .16907 |
| #2 | 2.654 | 25.02 | .06604 | .0449 | .00578 | .16837 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.04 |
| #1 | 184.62 |
| #2 | 185.46 |

Method: 2010A Sample Name: K1009548-001L Operator: JC
Comment: 1/5 (217456) (092110A)
Run Time: 09/21/10 10:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0410 | .0025 | .0017 | .00593 | -.00001 | .0648 |
| #1 | .0314 | -.0078 | -.0035 | .00587 | .00000 | .0645 |
| #2 | .0506 | .0127 | .0068 | .00599 | -.00001 | .0650 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | 5.654 | .0041 | .0008 | -.0008 | 6.349 |
| #1 | .0010 | 5.623 | .0039 | .0009 | -.0007 | 6.339 |
| #2 | .0003 | 5.686 | .0043 | .0008 | -.0009 | 6.360 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0061 | 2.8881 | .35450 | -.0005 | -.0019 | 4.153 |
| #1 | -.0081 | 2.8822 | .35370 | -.0007 | -.0017 | 4.147 |
| #2 | -.0040 | 2.8941 | .35529 | -.0002 | -.0022 | 4.159 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0004 | .0003 | 34.33 | -.0054 | .0059 | .0182 |
| #1 | .0048 | .0001 | 34.42 | .0021 | .0077 | .0181 |
| #2 | -.0055 | .0005 | 34.25 | -.0129 | .0041 | .0182 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .5069 | 4.663 | .01736 | -.0004 | .00112 | .03466 |
| #1 | .5042 | 4.659 | .01733 | .0007 | .00086 | .03451 |
| #2 | .5095 | 4.667 | .01739 | -.0015 | .00138 | .03481 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.98 |
| #1 | 187.70 |
| #2 | 188.26 |

Method: 2010A Sample Name: K1009548-001S Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.985 | .4384 | .9386 | 1.9409 | .04513 | 1.218 |
| #1 | 1.984 | .4358 | .9607 | 1.9414 | .04517 | 1.219 |
| #2 | 1.986 | .4410 | .9166 | 1.9404 | .04509 | 1.217 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0713 | 38.61 | .1933 | .4548 | .2200 | 34.50 |
| #1 | .0713 | 38.57 | .1928 | .4540 | .2197 | 34.54 |
| #2 | .0714 | 38.66 | .1939 | .4555 | .2203 | 34.46 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4744 | 25.06 | 2.5164 | .8706 | .4474 | 31.77 |
| #1 | .4766 | 25.07 | 2.5179 | .8642 | .4483 | 31.82 |
| #2 | .4722 | 25.06 | 2.5149 | .8770 | .4466 | 31.73 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9019 | .0411 | 177.3 | .0078 | .4842 | .5675 |
| #1 | .8982 | .0451 | 177.7 | .0125 | .4833 | .5674 |
| #2 | .9056 | .0370 | 176.8 | .0031 | .4851 | .5677 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.785 | 26.76 | .06984 | .8914 | .00628 | .18481 |
| #1 | 2.784 | 26.76 | .07083 | .8648 | .00661 | .18541 |
| #2 | 2.785 | 26.76 | .06885 | .9180 | .00595 | .18421 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 183.47 |
| #1 | 183.00 |
| #2 | 183.94 |

Method: 2010A Sample Name: K1009548-002 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1322 | .0027 | .0000 | .02500 | -.00001 | .3499 |
| #1 | .1353 | -.0016 | -.0076 | .02509 | -.00002 | .3507 |
| #2 | .1290 | .0071 | .0076 | .02492 | .00000 | .3491 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0023 | 29.66 | .0126 | .0009 | .0001 | 34.16 |
| #1 | .0019 | 29.44 | .0124 | .0006 | -.0014 | 34.06 |
| #2 | .0026 | 29.88 | .0127 | .0013 | .0017 | 34.26 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0071 | 16.37 | 1.5735 | .0077 | .0030 | 20.23 |
| #1 | -.0039 | 16.33 | 1.5671 | .0104 | .0023 | 20.26 |
| #2 | -.0104 | 16.42 | 1.5800 | .0049 | .0036 | 20.21 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0109 | -.0017 | 168.3 | .0023 | .0264 | .1628 |
| #1 | .0094 | -.0031 | 168.1 | -.0002 | .0280 | .1630 |
| #2 | .0124 | -.0002 | 168.5 | .0049 | .0249 | .1626 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.754 | 27.88 | .06209 | .0471 | .00681 | .17907 |
| #1 | 2.752 | 27.84 | .06122 | .0439 | .00726 | .17936 |
| #2 | 2.755 | 27.93 | .06296 | .0503 | .00636 | .17877 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 184.59 |
| #1 | 184.51 |
| #2 | 184.67 |

Method: 2010A Sample Name: RB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:11 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0088 | -.0034 | .0148 | .00017 | -.00001 | -.0007 |
| #1 | -.0048 | -.0049 | .0245 | -.00004 | .00000 | .0002 |
| #2 | .0224 | -.0020 | .0052 | .00038 | -.00001 | -.0015 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0001 | .0060 | .0022 | .0010 | -.0022 | .0132 |
| #1 | -.0003 | .0104 | .0012 | .0013 | -.0013 | .0239 |
| #2 | .0001 | .0017 | .0032 | .0007 | -.0031 | .0026 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0070 | .00023 | .00019 | .0003 | .0013 | .0162 |
| #1 | -.0081 | .00034 | .00015 | .0000 | .0011 | .0130 |
| #2 | -.0058 | .00012 | .00024 | .0006 | .0014 | .0194 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0052 | .0003 | .0092 | .0014 | -.0009 | -.0005 |
| #1 | .0088 | -.0028 | .0112 | .0047 | -.0007 | -.0002 |
| #2 | .0015 | .0034 | .0073 | -.0019 | -.0010 | -.0009 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0109 | .0014 | .00140 | -.0049 | .00017 | -.00001 |
| #1 | .0123 | .0039 | .00097 | .0015 | .00029 | .00000 |
| #2 | .0096 | -.0011 | .00184 | -.0112 | .00005 | -.00002 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.89 |
| #1 | 185.71 |
| #2 | 186.07 |

Method: 2010A Sample Name: K1009986-MB Operator: JC
Comment: TCLP RD (217456) (092110A)
Run Time: 09/21/10 10:14 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0607 | .0054 | .0059 | .31595 | .00003 | .0591 |
| #1 | .0670 | .0059 | .0086 | .31355 | .00007 | .0594 |
| #2 | .0543 | .0049 | .0031 | .31836 | -.00001 | .0589 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0001 | .0419 | .0025 | .0014 | -.0015 | .0282 |
| #1 | -.0002 | .0469 | .0019 | .0019 | -.0023 | .0297 |
| #2 | .0004 | .0368 | .0031 | .0008 | -.0007 | .0267 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0048 | .01136 | .00086 | .0010 | .0004 | .3430 |
| #1 | -.0159 | .01118 | .00080 | .0009 | .0008 | .3424 |
| #2 | .0063 | .01154 | .00092 | .0011 | .0001 | .3435 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0044 | .0034 | >180.0 | .0021 | -.0022 | .0875 |
| #1 | .0147 | .0057 | >180.0 | .0057 | -.0038 | .0868 |
| #2 | -.0059 | .0011 | >180.0 | -.0015 | -.0007 | .0882 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0166 | .1898 | .00318 | .2852 | -.00017 | .00704 |
| #1 | .0083 | .1894 | .00076 | .2636 | .00010 | .00709 |
| #2 | .0248 | .1903 | .00560 | .3068 | -.00045 | .00700 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 174.66 |
| #1 | 174.10 |
| #2 | 175.23 |

Method: 2010A Sample Name: LCSW Operator: JC
Comment: TCLP RD K1009986 (217456) (092110A)
Run Time: 09/21/10 10:17 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0729 | 9.777 | 5.088 | 10.690 | >9.0000 * | .0545 |
| #1 | .0517 | 9.760 | 5.040 | 10.647 | >9.0000 | .0548 |
| #2 | .0941 | 9.795 | 5.136 | 10.734 | >9.0000 | .0543 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9796 | .0587 | 4.852 | 10.21 | 9.519 | .0111 |
| #1 | .9713 | .0534 | 4.819 | 10.15 | 9.533 | .0116 |
| #2 | .9879 | .0640 | 4.886 | 10.28 | 9.505 | .0106 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 4.835 | .00997 | .00084 | 10.07 | 10.16 | .3296 |
| #1 | 4.814 | .00986 | .00079 | 9.961 | 10.08 | .3238 |
| #2 | 4.856 | .01008 | .00089 | 10.19 | 10.25 | .3353 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.007 | .9255 | >180.0 | .0158 | 9.856 | 10.66 |
| #1 | 1.019 | .9315 | >180.0 | .0141 | 9.866 | 10.55 |
| #2 | .9944 | .9195 | >180.0 | .0174 | 9.845 | 10.76 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.2431 | .2914 | .00968 | 10.13 | .00026 | .00737 |
| #1 | -.2310 | .2937 | .01059 | 10.02 | -.00006 | .00733 |
| #2 | -.2552 | .2892 | .00877 | 10.25 | .00058 | .00741 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 174.95 |
| #1 | 174.19 |
| #2 | 175.71 |

*Std Dilution
JC 9/21/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 10:20 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.007 | .0185 | .0097 | 2.4754 | .04824 | .0024 |
| Stddev | .013 | .0003 | .0112 | .0069 | .00096 | .0014 |
| %RSD | .2680 | 1.420 | 115.6 | .27699 | 1.9812 | 57.68 |
| #1 | 4.998 | .0183 | .0177 | 2.4803 | .04891 | .0014 |
| #2 | 5.017 | .0187 | .0018 | 2.4706 | .04756 | .0034 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 10.00% | | | 10.000% | 10.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0026 | 25.78 | .0031 | -.0002 | -.0016 | 24.15 |
| Stddev | .0002 | .22 | .0003 | .0014 | .0008 | .20 |
| %RSD | 9.384 | .8415 | 8.662 | 864.7 | 49.18 | .8273 |
| #1 | .0024 | 25.94 | .0029 | .0009 | -.0010 | 24.29 |
| #2 | .0028 | 25.63 | .0033 | -.0012 | -.0021 | 24.01 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 10.00% | | | | 10.00% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0018 | 25.11 | 4.825 | .0387 | -.0019 | 9.825 |
| Stddev | .0035 | .12 | .039 | .0228 | .0015 | .069 |
| %RSD | 186.9 | .4607 | .8050 | 58.89 | 75.04 | .7023 |
| #1 | -.0006 | 25.20 | 4.852 | .0547 | -.0009 | 9.776 |
| #2 | .0043 | 25.03 | 4.797 | .0226 | -.0030 | 9.874 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0113 | .0021 | 9.453 | .0036 | -.0009 | .0021 |
| Stddev | .0094 | .0000 | .037 | .0016 | .0014 | .0017 |
| %RSD | 82.91 | .6037 | .3876 | 44.61 | 145.2 | 81.54 |
| #1 | .0180 | .0021 | 9.427 | .0047 | -.0019 | .0033 |
| #2 | .0047 | .0021 | 9.479 | .0025 | .0000 | .0009 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 10.00% | | | |

Sample Name: CCVB Run Time: 09/21/10 10:20

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 10.17 | 2.511 | .00353 | .0750 | .48996 | .47717 |
| Stddev | .03 | .008 | .00013 | .0331 | .00535 | .00280 |
| %RSD | .2636 | .3056 | 3.6759 | 44.08 | 1.0918 | .58616 |
| | | | | | | |
| #1 | 10.19 | 2.505 | .00344 | .0984 | .48617 | .47915 |
| #2 | 10.15 | 2.516 | .00362 | .0516 | .49374 | .47519 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 10.00% | 10.00% | | | 10.000% | 10.000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.45 |
| Stddev | 1.02 |
| %RSD | .54052 |
| | |
| #1 | 187.73 |
| #2 | 189.17 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 10:23 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0356 | 2.437 | 2.518 | .00152 | -.00022 | .4935 |
| Stddev | .0011 | .001 | .003 | .00021 | .00004 | .0009 |
| %RSD | 3.092 | .0478 | .0981 | 13.760 | 18.849 | .1851 |
| #1 | .0363 | 2.437 | 2.516 | .00167 | -.00025 | .4928 |
| #2 | .0348 | 2.436 | 2.520 | .00137 | -.00019 | .4941 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4919 | 2.551 | .4914 | .4865 | .5046 | .4907 |
| Stddev | .0033 | .017 | .0047 | .0030 | .0027 | .0086 |
| %RSD | .6649 | .6521 | .9588 | .6259 | .5389 | 1.746 |
| #1 | .4896 | 2.563 | .4880 | .4843 | .5027 | .4968 |
| #2 | .4942 | 2.539 | .4947 | .4887 | .5065 | .4847 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.377 | 1.9630 | .97783 | .9665 | .4844 | .0196 |
| Stddev | .021 | .0062 | .00419 | .0116 | .0018 | .0033 |
| %RSD | .8609 | .31544 | .42860 | 1.200 | .3644 | 17.05 |
| #1 | 2.363 | 1.9673 | .98079 | .9583 | .4832 | .0173 |
| #2 | 2.392 | 1.9586 | .97486 | .9747 | .4857 | .0220 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.414 | .4843 | .0340 | 2.326 | .4623 | .4918 |
| Stddev | .026 | .0004 | .0038 | .010 | .0035 | .0034 |
| %RSD | 1.081 | .0858 | 11.23 | .4460 | .7585 | .6813 |
| #1 | 2.395 | .4840 | .0367 | 2.319 | .4598 | .4894 |
| #2 | 2.432 | .4846 | .0313 | 2.333 | .4648 | .4941 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Sample Name: CCVA Run Time: 09/21/10 10:23

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0152 | .0573 | .48320 | 4.791 | .00051 | .00070 |
| Stddev | .0145 | .0017 | .00529 | .008 | .00000 | .00004 |
| %RSD | 95.35 | 2.984 | 1.0956 | .1701 | .21202 | 5.9862 |
| #1 | -.0255 | .0561 | .47945 | 4.785 | .00051 | .00067 |
| #2 | -.0050 | .0585 | .48694 | 4.797 | .00051 | .00073 |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 189.56 |
| Stddev | .55 |
| %RSD | .29001 |
| #1 | 189.94 |
| #2 | 189.17 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 10:26 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0120 | -.0033 | .0052 | .00061 | .00003 | .0006 |
| Stddev | .0101 | .0020 | .0068 | .00038 | .00009 | .0006 |
| %RSD | 84.71 | 61.99 | 132.1 | 61.839 | 344.14 | 99.37 |
| #1 | .0192 | -.0047 | .0100 | .00088 | -.00004 | .0010 |
| #2 | .0048 | -.0018 | .0003 | .00034 | .00009 | .0002 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0003 | -.0039 | .0021 | .0007 | -.0002 | .0017 |
| Stddev | .0003 | .0058 | .0003 | .0002 | .0029 | .0006 |
| %RSD | 87.53 | 150.3 | 15.67 | 37.11 | 1195. | 36.47 |
| #1 | .0005 | .0002 | .0018 | .0008 | .0018 | .0021 |
| #2 | .0001 | -.0079 | .0023 | .0005 | -.0023 | .0012 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0019 | .00264 | .00073 | .0075 | -.0004 | .0123 |
| Stddev | .0046 | .00018 | .00000 | .0013 | .0003 | .0097 |
| %RSD | 236.9 | 6.6804 | .57387 | 17.86 | 72.41 | 78.16 |
| #1 | .0052 | .00251 | .00073 | .0084 | -.0002 | .0055 |
| #2 | -.0013 | .00276 | .00073 | .0065 | -.0006 | .0192 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0059 | .0015 | .0247 | -.0012 | -.0042 | -.0012 |
| Stddev | .0063 | .0005 | .0036 | .0027 | .0009 | .0004 |
| %RSD | 106.0 | 31.39 | 14.71 | 219.0 | 22.09 | 29.16 |
| #1 | .0103 | .0018 | .0273 | -.0032 | -.0049 | -.0015 |
| #2 | .0015 | .0011 | .0221 | .0007 | -.0036 | -.0010 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 10:26

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0091 | -.0040 | .00216 | .0096 | -.00006 | .00004 |
| Stddev | .0002 | .0016 | .00080 | .0060 | .00009 | .00005 |
| %RSD | 2.487 | 38.76 | 37.253 | 62.49 | 141.68 | 114.32 |
| #1 | .0093 | -.0029 | .00273 | .0139 | -.00012 | .00007 |
| #2 | .0089 | -.0051 | .00159 | .0054 | .00000 | .00001 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.02 |
| Stddev | .47 |
| %RSD | .25182 |
| #1 | 187.69 |
| #2 | 188.36 |

Method: 2010A Sample Name: K1009986-001 Operator: JC
Comment: TCLP RD (217456) (092110A)
Run Time: 09/21/10 10:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1288 | 3.536 | 3.286 | 17.396 | .09990 | .2385 |
| #1 | .1239 | 3.515 | 3.281 | 17.307 | .09992 | .2362 |
| #2 | .1336 | 3.556 | 3.292 | 17.485 | .09987 | .2408 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 32.74 | 668.2 | .8131 | 1.199 | .2083 | .0499 |
| #1 | 32.65 | 658.1 | .8082 | 1.192 | .2109 | .0544 |
| #2 | 32.82 | 678.3 | .8180 | 1.206 | .2057 | .0453 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4045 | 29.16 | .86341 | .8546 | 1.037 | 13.41 |
| #1 | .4037 | 29.03 | .86167 | .8477 | 1.033 | 13.39 |
| #2 | .4053 | 29.28 | .86515 | .8615 | 1.042 | 13.43 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.274 | -.0006 | >180.0 | .0055 | .0168 | .1966 |
| #1 | 1.255 | .0012 | >180.0 | .0066 | .0172 | .1955 |
| #2 | 1.292 | -.0023 | >180.0 | .0044 | .0163 | .1977 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4373 | 3.771 | .00309 | 1.493 | .02953 | 3.7995 |
| #1 | .4444 | 3.742 | .00325 | 1.456 | .02960 | 3.8096 |
| #2 | .4301 | 3.800 | .00292 | 1.531 | .02946 | 3.7894 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 168.02 |
| #1 | 166.88 |
| #2 | 169.16 |

Method: 2010A Sample Name: K1009986-001D Operator: JC
Comment: TCLP RD (217456) (092110A)
Run Time: 09/21/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1255 | 3.520 | 3.255 | 17.328 | .09836 | .2369 |
| #1 | .1175 | 3.492 | 3.254 | 17.190 | .09788 | .2357 |
| #2 | .1336 | 3.549 | 3.256 | 17.466 | .09884 | .2381 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 32.63 | 678.4 | .8063 | 1.193 | .2028 | .0661 |
| #1 | 32.28 | 671.7 | .7989 | 1.181 | .2030 | .0670 |
| #2 | 32.97 | 685.1 | .8138 | 1.205 | .2027 | .0652 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .3937 | 28.97 | .86043 | .8505 | 1.033 | 13.37 |
| #1 | .3887 | 28.99 | .85810 | .8439 | 1.022 | 13.39 |
| #2 | .3988 | 28.94 | .86276 | .8571 | 1.044 | 13.36 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.243 | .0024 | >180.0 | -.0025 | .0166 | .1978 |
| #1 | 1.252 | .0009 | >180.0 | .0030 | .0194 | .1956 |
| #2 | 1.235 | .0038 | >180.0 | -.0079 | .0139 | .1999 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4273 | 3.803 | .00456 | 1.419 | .02942 | 3.7365 |
| #1 | .4130 | 3.784 | .00512 | 1.384 | .02945 | 3.7197 |
| #2 | .4417 | 3.822 | .00400 | 1.454 | .02939 | 3.7533 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 170.17 |
| #1 | 170.37 |
| #2 | 169.96 |

Method: 2010A Sample Name: K1009986-001S Operator: JC
Comment: TCLP RD (217456) (092110A)
Run Time: 09/21/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2430 | 13.23 | 8.283 | 27.032 | >9.0000 | .2560 |
| #1 | .2531 | 13.17 | 8.237 | 26.905 | >9.0000 | .2546 |
| #2 | .2328 | 13.29 | 8.330 | 27.159 | >9.0000 | .2575 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 33.54 | 672.2 | 5.531 | 10.99 | 9.984 | .0886 |
| #1 | 33.55 | 664.9 | 5.524 | 10.95 | 9.989 | .0892 |
| #2 | 33.54 | 679.5 | 5.538 | 11.04 | 9.979 | .0880 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.075 | 27.94 | .86990 | 10.74 | 10.86 | 13.49 |
| #1 | 5.067 | 27.89 | .86938 | 10.68 | 10.83 | 13.53 |
| #2 | 5.083 | 28.00 | .87042 | 10.80 | 10.88 | 13.44 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.339 | .9230 | >180.0 | .0022 | 9.879 | 10.27 |
| #1 | 2.315 | .9140 | >180.0 | .0085 | 9.873 | 10.23 |
| #2 | 2.362 | .9320 | >180.0 | -.0041 | 9.885 | 10.31 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .3543 | 4.302 | .01218 | 10.96 | .03024 | 3.8319 |
| #1 | .3576 | 4.274 | .00968 | 10.88 | .03076 | 3.8442 |
| #2 | .3511 | 4.330 | .01469 | 11.04 | .02973 | 3.8195 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 167.55 |
| #1 | 166.55 |
| #2 | 168.55 |

x See Dilution
JC 9/21/10

Method: 2010A Sample Name: LCSW Operator: JC
Comment: TCLP RD 1/5 (217456) (092110A)
Run Time: 09/21/10 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0244 | 1.962 | .9677 | 2.0763 | 2.0700 | .0114 |
| #1 | .0196 | 1.964 | .9883 | 2.0775 | 2.0762 | .0111 |
| #2 | .0292 | 1.960 | .9471 | 2.0751 | 2.0639 | .0117 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1956 | .0303 | .9528 | 1.913 | 1.999 | -.0011 |
| #1 | .1972 | .0424 | .9533 | 1.913 | 2.003 | -.0007 |
| #2 | .1941 | .0183 | .9524 | 1.914 | 1.995 | -.0015 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9239 | .00264 | .00016 | 1.984 | 1.894 | .1259 |
| #1 | .9223 | .00292 | .00008 | 1.993 | 1.892 | .1342 |
| #2 | .9255 | .00235 | .00023 | 1.976 | 1.895 | .1176 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1792 | .1856 | >180.0 | -.0033 | 1.924 | 1.946 |
| #1 | .1755 | .1864 | >180.0 | -.0038 | 1.923 | 1.946 |
| #2 | .1830 | .1848 | >180.0 | -.0028 | 1.925 | 1.947 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0357 | .0529 | .00346 | 1.936 | -.00005 | .00156 |
| #1 | -.0327 | .0547 | .00376 | 1.955 | .00019 | .00161 |
| #2 | -.0387 | .0512 | .00316 | 1.916 | -.00029 | .00151 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.44 |
| #1 | 188.32 |
| #2 | 188.57 |

Method: 2010A Sample Name: K1009986-001S Operator: JC
Comment: TCLP RD 1/5 (217456) (092110A)
Run Time: 09/21/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0746 | 2.812 | 1.730 | 5.7364 | 2.1842 | .0577 |
| #1 | .0746 | 2.789 | 1.718 | 5.7222 | 2.1820 | .0583 |
| #2 | .0745 | 2.835 | 1.742 | 5.7505 | 2.1864 | .0571 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 7.001 | 139.9 | 1.150 | 2.211 | 2.075 | .0175 |
| #1 | 7.008 | 139.5 | 1.147 | 2.205 | 2.073 | .0177 |
| #2 | 6.993 | 140.3 | 1.153 | 2.217 | 2.077 | .0173 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.065 | 5.8595 | .16553 | 2.223 | 2.164 | 3.038 |
| #1 | 1.068 | 5.8491 | .16554 | 2.218 | 2.159 | 3.009 |
| #2 | 1.062 | 5.8700 | .16552 | 2.228 | 2.170 | 3.067 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4612 | .1877 | >180.0 | .0033 | 2.008 | 2.006 |
| #1 | .4711 | .1853 | >180.0 | .0053 | 2.001 | 2.000 |
| #2 | .4513 | .1901 | >180.0 | .0012 | 2.015 | 2.012 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0546 | .9290 | .00326 | 2.291 | .00720 | .79361 |
| #1 | .0321 | .9280 | .00310 | 2.272 | .00664 | .79267 |
| #2 | .0771 | .9299 | .00343 | 2.311 | .00775 | .79456 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 183.19 |
| #1 | 183.09 |
| #2 | 183.29 |

Method: 2010A Sample Name: RB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0128 | -.0041 | .0024 | .00049 | .00010 | -.0006 |
| #1 | .0064 | -.0036 | .0017 | .00104 | .00015 | -.0002 |
| #2 | .0192 | -.0047 | .0031 | -.00007 | .00005 | -.0010 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0014 | .0010 | .0023 | .0014 | .0017 | -.0028 |
| #1 | .0025 | .0036 | .0026 | .0009 | .0018 | -.0027 |
| #2 | .0002 | -.0017 | .0019 | .0019 | .0015 | -.0029 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0028 | .00008 | .00000 | .0147 | .0008 | .0297 |
| #1 | .0095 | .00008 | .00004 | .0187 | .0011 | .0429 |
| #2 | -.0040 | .00009 | -.00004 | .0106 | .0004 | .0164 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0044 | .0016 | .0627 | .0031 | -.0040 | -.0006 |
| #1 | -.0015 | .0018 | .0717 | .0016 | -.0045 | .0001 |
| #2 | -.0074 | .0015 | .0537 | .0045 | -.0036 | -.0012 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0045 | -.0035 | .00009 | .0025 | .00052 | .00005 |
| #1 | -.0104 | -.0021 | -.00049 | .0057 | .00037 | .00011 |
| #2 | .0014 | -.0048 | .00067 | -.0007 | .00068 | -.00001 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.23 |
| #1 | 185.82 |
| #2 | 186.64 |

Method: 2010A Sample Name: K1009597-MB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:50 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0024 | .0006 | .0086 | .00027 | -.00009 | -.0005 |
| #1 | .0128 | -.0028 | -.0038 | .00010 | -.00007 | .0001 |
| #2 | -.0080 | .0039 | .0210 | .00044 | -.00011 | -.0010 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0008 | -.0024 | .0019 | .0009 | -.0022 | -.0016 |
| #1 | .0009 | -.0036 | .0022 | .0006 | -.0018 | -.0016 |
| #2 | .0007 | -.0012 | .0015 | .0011 | -.0026 | -.0017 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0077 | .00017 | .00019 | .0051 | .0000 | .0388 |
| #1 | -.0109 | .00023 | .00014 | .0072 | .0006 | .0519 |
| #2 | -.0045 | .00011 | .00024 | .0030 | -.0005 | .0256 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0059 | .0031 | .0474 | .0066 | -.0001 | .0014 |
| #1 | -.0059 | .0041 | .0492 | .0056 | .0022 | .0009 |
| #2 | -.0059 | .0021 | .0456 | .0075 | -.0024 | .0018 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1680 | .0009 | .00141 | -.0006 | .00025 | -.00001 |
| #1 | .1511 | .0012 | .00253 | .0142 | -.00013 | -.00002 |
| #2 | .1850 | .0006 | .00028 | -.0155 | .00062 | .00000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.42 |
| #1 | 186.02 |
| #2 | 186.83 |

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1009597 (217456) (092110A)
Run Time: 09/21/10 10:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 4.912 | 2.395 | 2.518 | 4.8993 | .12064 | .9127 |
| #1 | 4.888 | 2.387 | 2.517 | 4.9004 | .12068 | .9093 |
| #2 | 4.936 | 2.403 | 2.519 | 4.8981 | .12060 | .9161 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.193 | 12.29 | .4747 | 1.204 | .6201 | 2.307 |
| #1 | 1.193 | 12.26 | .4754 | 1.204 | .6196 | 2.307 |
| #2 | 1.193 | 12.32 | .4740 | 1.204 | .6206 | 2.307 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.338 | 12.15 | 1.1723 | .8941 | 1.182 | 12.71 |
| #1 | 2.341 | 12.16 | 1.1798 | .8868 | 1.181 | 12.63 |
| #2 | 2.336 | 12.14 | 1.1647 | .9014 | 1.183 | 12.80 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.426 | .5990 | 12.17 | .0136 | 1.197 | 1.184 |
| #1 | 2.435 | .5996 | 12.10 | .0194 | 1.198 | 1.183 |
| #2 | 2.416 | .5985 | 12.24 | .0077 | 1.196 | 1.185 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1257 | .0017 | .00183 | 2.382 | .00040 | .00207 |
| #1 | .1293 | .0014 | -.00019 | 2.375 | .00056 | .00208 |
| #2 | .1221 | .0021 | .00384 | 2.389 | .00024 | .00206 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.95 |
| #1 | 186.60 |
| #2 | 187.30 |

Method: 2010A Sample Name: K1009597-012 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 10:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0587 | .0084 | .0045 | .02394 | .00003 | .0532 |
| #1 | .0668 | .0050 | .0048 | .02440 | .00006 | .0539 |
| #2 | .0507 | .0118 | .0041 | .02348 | .00001 | .0524 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 17.71 | 7.155 | -.0018 | .0016 | .4263 | 2.937 |
| #1 | 17.70 | 7.095 | -.0002 | .0023 | .4315 | 2.939 |
| #2 | 17.72 | 7.214 | -.0034 | .0009 | .4211 | 2.935 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0013 | 7.6446 | .06571 | .0028 | -.0009 | 79.85 |
| #1 | .0015 | 7.6258 | .06606 | .0039 | -.0005 | 80.61 |
| #2 | -.0040 | 7.6634 | .06537 | .0016 | -.0014 | 79.09 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0035 | .0007 | 117.3 | .0056 | .0003 | .0554 |
| #1 | -.0042 | .0031 | 118.1 | .0060 | -.0014 | .0548 |
| #2 | -.0028 | -.0018 | 116.4 | .0053 | .0020 | .0560 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 12.94 | .8677 | .00130 | .0246 | .00184 | .05540 |
| #1 | 12.92 | .8656 | .00205 | .0383 | .00230 | .05547 |
| #2 | 12.95 | .8699 | .00055 | .0108 | .00139 | .05533 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.76 |
| #1 | 187.44 |
| #2 | 188.08 |

Method: 2010A Sample Name: K1009597-012L Operator: JC
Comment: 1/5 (217456) (092110A)
Run Time: 09/21/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0147 | -.0014 | .0044 | .00510 | -.00003 | .0102 |
| #1 | .0194 | .0001 | -.0091 | .00505 | -.00001 | .0102 |
| #2 | .0099 | -.0029 | .0178 | .00515 | -.00005 | .0102 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 3.393 | 1.448 | .0004 | .0009 | .0791 | .6011 |
| #1 | 3.392 | 1.444 | .0002 | .0001 | .0803 | .6019 |
| #2 | 3.395 | 1.451 | .0006 | .0017 | .0778 | .6003 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0038 | 1.6394 | .01342 | .0024 | -.0005 | 15.96 |
| #1 | .0018 | 1.6448 | .01339 | .0031 | -.0016 | 15.91 |
| #2 | .0058 | 1.6339 | .01344 | .0016 | .0007 | 16.01 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0059 | .0028 | 24.98 | -.0028 | -.0009 | .0102 |
| #1 | -.0029 | .0024 | 24.95 | -.0015 | -.0023 | .0111 |
| #2 | .0148 | .0031 | 25.02 | -.0041 | .0005 | .0093 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.601 | .1715 | .00271 | .0199 | .00046 | .01116 |
| #1 | 2.596 | .1708 | .00213 | .0220 | .00006 | .01123 |
| #2 | 2.606 | .1722 | .00329 | .0177 | .00085 | .01109 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 190.20 |
| #1 | 189.90 |
| #2 | 190.50 |

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 11:02 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 4.899 | .0095 | .0031 | 2.4325 | .04794 | .0008 |
| Stddev | .011 | .0055 | .0098 | .0061 | .00010 | .0009 |
| %RSD | .2312 | 58.07 | 317.3 | .25123 | .20245 | 118.5 |
| #1 | 4.891 | .0134 | .0100 | 2.4282 | .04787 | .0001 |
| #2 | 4.907 | .0056 | -.0038 | 2.4368 | .04801 | .0014 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 10.00% | | | 10.000% | 10.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0028 | 24.63 | .0033 | -.0002 | -.0006 | 23.45 |
| Stddev | .0002 | .13 | .0000 | .0001 | .0009 | .00 |
| %RSD | 7.591 | .5324 | 1.398 | 42.12 | 160.5 | .0156 |
| #1 | .0029 | 24.54 | .0033 | -.0001 | -.0012 | 23.45 |
| #2 | .0026 | 24.73 | .0033 | -.0003 | .0001 | 23.46 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 10.00% | | | | 10.00% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0057 | 24.70 | 4.724 | .0023 | -.0023 | 9.947 |
| Stddev | .0071 | .02 | .010 | .0001 | .0001 | .017 |
| %RSD | 124.3 | .0696 | .2090 | 6.392 | 4.066 | .1681 |
| #1 | -.0007 | 24.71 | 4.717 | .0024 | -.0023 | 9.959 |
| #2 | -.0108 | 24.69 | 4.731 | .0022 | -.0022 | 9.935 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0042 | .0050 | 9.749 | .0090 | .0004 | .0025 |
| Stddev | .0042 | .0009 | .004 | .0095 | .0042 | .0009 |
| %RSD | 99.40 | 18.25 | .0398 | 105.4 | 1085. | 34.64 |
| #1 | -.0012 | .0057 | 9.752 | .0157 | -.0026 | .0032 |
| #2 | -.0071 | .0044 | 9.746 | .0023 | .0033 | .0019 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 10.00% | | | |

Sample Name: CCVB Run Time: 09/21/10 11:02

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 9.969 | 2.453 | .00176 | .0237 | .49525 | .47346 |
| Stddev | .042 | .004 | .00010 | .0133 | .00027 | .00131 |
| %RSD | .4193 | .1832 | 5.6489 | 56.18 | .05529 | .27596 |
| | | | | | | |
| #1 | 9.940 | 2.450 | .00183 | .0331 | .49544 | .47253 |
| #2 | 9.999 | 2.457 | .00169 | .0143 | .49505 | .47438 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 10.00% | 10.00% | | | 10.000% | 10.000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.57 |
| Stddev | .24 |
| %RSD | .12992 |
| | |
| #1 | 187.75 |
| #2 | 187.40 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 11:05 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0108 | 2.428 | 2.453 | .00157 | -.00027 | .4893 |
| Stddev | .0022 | .002 | .011 | .00061 | .00007 | .0004 |
| %RSD | 20.86 | .0612 | .4487 | 38.478 | 26.981 | .0902 |
| #1 | .0092 | 2.427 | 2.445 | .00200 | -.00032 | .4890 |
| #2 | .0124 | 2.429 | 2.461 | .00115 | -.00021 | .4896 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4819 | 2.505 | .4852 | .4809 | .4967 | .4854 |
| Stddev | .0003 | .005 | .0033 | .0000 | .0009 | .0080 |
| %RSD | .0650 | .1979 | .6899 | .0026 | .1790 | 1.644 |
| #1 | .4822 | 2.501 | .4829 | .4809 | .4973 | .4910 |
| #2 | .4817 | 2.509 | .4876 | .4809 | .4961 | .4798 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.346 | 1.9450 | .95978 | .9518 | .4753 | .0369 |
| Stddev | .012 | .0024 | .00286 | .0068 | .0024 | .0110 |
| %RSD | .4932 | .12222 | .29787 | .7152 | .5009 | 29.70 |
| #1 | 2.338 | 1.9433 | .96180 | .9470 | .4737 | .0446 |
| #2 | 2.354 | 1.9467 | .95776 | .9566 | .4770 | .0291 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.376 | .4881 | .0430 | 2.291 | .4639 | .4815 |
| Stddev | .006 | .0036 | .0025 | .007 | .0026 | .0016 |
| %RSD | .2352 | .7348 | 5.742 | .3154 | .5664 | .3276 |
| #1 | 2.372 | .4856 | .0447 | 2.286 | .4658 | .4803 |
| #2 | 2.380 | .4906 | .0412 | 2.296 | .4621 | .4826 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Sample Name: CCVA Run Time: 09/21/10 11:05

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0041 | .0574 | .47649 | 4.645 | .00035 | .00075 |
| Stddev | .0168 | .0000 | .00399 | .032 | .00009 | .00007 |
| %RSD | 404.4 | .0870 | .83808 | .6819 | 25.417 | 8.9911 |
| | | | | | | |
| #1 | .0160 | .0575 | .47367 | 4.623 | .00041 | .00080 |
| #2 | -.0077 | .0574 | .47931 | 4.668 | .00029 | .00070 |
| | | | | | | |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 189.59 |
| Stddev | .15 |
| %RSD | .08107 |
| | |
| #1 | 189.48 |
| #2 | 189.69 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 11:08 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0088 | .0054 | .0048 | .00039 | -.00005 | .0000 |
| Stddev | .0034 | .0090 | .0044 | .00001 | .00001 | .001 |
| %RSD | 38.54 | 166.0 | 90.94 | 2.6533 | 20.706 | 24700. |
| #1 | .0112 | .0118 | .0079 | .00039 | -.00006 | .0006 |
| #2 | .0064 | -.0009 | .0017 | .00040 | -.00004 | -.0006 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0000 | .0027 | .0025 | .0010 | -.0009 | .0019 |
| Stddev | .0012 | .0007 | .0001 | .0013 | .0007 | .0002 |
| %RSD | 2593. | 25.49 | 5.583 | 132.2 | 76.64 | 11.83 |
| #1 | .0009 | .0022 | .0026 | .0018 | -.0004 | .0020 |
| #2 | -.0008 | .0031 | .0024 | .0001 | -.0013 | .0017 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0061 | .00290 | .00062 | .0051 | .0005 | .0180 |
| Stddev | .0066 | .00010 | .00029 | .0033 | .0001 | .0031 |
| %RSD | 107.4 | 3.4416 | 47.031 | 65.53 | 28.13 | 17.10 |
| #1 | .0107 | .00297 | .00083 | .0075 | .0005 | .0201 |
| #2 | .0015 | .00283 | .00041 | .0027 | .0004 | .0158 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0037 | .0000 | .0177 | .0026 | -.0038 | -.0008 |
| Stddev | .0052 | .0007 | .0024 | .0002 | .0007 | .0009 |
| %RSD | 141.6 | 26150. | 13.49 | 8.769 | 19.65 | 114.9 |
| #1 | .0000 | -.0005 | .0194 | .0024 | -.0043 | -.0015 |
| #2 | -.0074 | .0005 | .0160 | .0028 | -.0032 | -.0002 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 11:08

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0117 | -.0028 | .00186 | .0076 | .00017 | .00010 |
| Stddev | .0046 | .0013 | .00069 | .0297 | .00028 | .00005 |
| %RSD | 39.30 | 47.56 | 36.904 | 391.9 | 164.73 | 45.568 |
| | | | | | | |
| #1 | .0084 | -.0018 | .00138 | -.0134 | -.00003 | .00014 |
| #2 | .0149 | -.0037 | .00235 | .0285 | .00037 | .00007 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.36 |
| Stddev | .66 |
| %RSD | .35023 |
| | |
| #1 | 186.90 |
| #2 | 187.83 |

Method: 2010A Sample Name: 50 ppm Cd Operator: JC
Comment: 1/5 (217456) (092110A)
Run Time: 09/21/10 11:12 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0048 | .0040 | .0003 | .00026 | -.00008 | -.0014 |
| #1 | -.0096 | .0089 | -.0066 | .00011 | -.00011 | -.0013 |
| #2 | .0192 | -.0009 | .0072 | .00041 | -.00005 | -.0014 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 51.49 | -.0007 | -.0068 | .0038 | -.0003 | -.0024 |
| #1 | 51.21 | -.0041 | -.0064 | .0033 | .0001 | -.0014 |
| #2 | 51.78 | .0027 | -.0072 | .0044 | -.0007 | -.0035 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0033 | -.00006 | .00005 | .0010 | .0006 | .0261 |
| #1 | -.0058 | -.00009 | .00005 | .0012 | .0002 | .0353 |
| #2 | -.0007 | -.00004 | .00005 | .0008 | .0011 | .0170 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | .0028 | .0194 | -.0012 | .0007 | -.0012 |
| #1 | -.0029 | .0060 | .0187 | .0071 | -.0013 | -.0008 |
| #2 | .0044 | -.0005 | .0202 | -.0095 | .0027 | -.0016 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0835 | -.0024 | .00206 | -.0017 | .00000 | .00003 |
| #1 | .0707 | -.0007 | .00269 | -.0070 | -.00016 | .00003 |
| #2 | .0962 | -.0041 | .00143 | .0036 | .00017 | .00004 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.25 |
| #1 | 186.27 |
| #2 | 186.24 |

Method: 2010A Sample Name: K1009597-012A Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0612 | .0059 | .0225 | .02638 | .00002 | .0605 |
| #1 | .0716 | .0020 | .0180 | .02643 | -.00002 | .0601 |
| #2 | .0509 | .0098 | .0270 | .02633 | .00005 | .0610 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 39.87 | 7.672 | -.0049 | .0045 | .4658 | 3.372 |
| #1 | 39.63 | 7.635 | -.0060 | .0046 | .4675 | 3.378 |
| #2 | 40.10 | 7.709 | -.0038 | .0044 | .4642 | 3.366 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0006 | 8.2392 | .07265 | .0000 | .0008 | 88.87 |
| #1 | .0039 | 8.2770 | .07259 | .0006 | .0014 | 88.12 |
| #2 | -.0026 | 8.2015 | .07272 | -.0006 | .0002 | 89.62 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0120 | .0021 | 129.9 | .0039 | .0016 | .0620 |
| #1 | .0061 | .0034 | 130.0 | .0002 | .0030 | .0627 |
| #2 | .0179 | .0008 | 129.9 | .0076 | .0001 | .0613 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 14.30 | .9631 | .00210 | .0356 | .00209 | .06167 |
| #1 | 14.25 | .9602 | .00171 | .0346 | .00211 | .06163 |
| #2 | 14.34 | .9660 | .00250 | .0366 | .00206 | .06171 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.30 |
| #1 | 186.03 |
| #2 | 186.56 |

6.2 mL 1000ppm Cd (METI-89-N)
Final volume 10 mL

Method: 2010A Sample Name: K1009597-012S Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.921 | .4491 | .8822 | 1.9178 | .04510 | .9056 |
| #1 | 1.909 | .4403 | .8698 | 1.9181 | .04518 | .9027 |
| #2 | 1.932 | .4579 | .8946 | 1.9174 | .04501 | .9086 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 17.29 | 16.30 | .1777 | .4533 | .6393 | 3.898 |
| #1 | 17.30 | 16.35 | .1777 | .4529 | .6420 | 3.907 |
| #2 | 17.29 | 16.25 | .1776 | .4536 | .6367 | 3.890 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4353 | 17.36 | .48407 | .8520 | .4441 | 87.48 |
| #1 | .4340 | 17.34 | .48458 | .8518 | .4440 | 88.04 |
| #2 | .4366 | 17.38 | .48356 | .8521 | .4442 | 86.92 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .8176 | .0395 | 123.6 | .0030 | .4521 | .5113 |
| #1 | .8228 | .0416 | 124.9 | .0046 | .4539 | .5097 |
| #2 | .8125 | .0373 | 122.3 | .0014 | .4503 | .5129 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 12.62 | .9063 | .00220 | .7927 | .00277 | .05586 |
| #1 | 12.57 | .9023 | .00127 | .7832 | .00249 | .05591 |
| #2 | 12.67 | .9102 | .00312 | .8021 | .00305 | .05580 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.36 |
| #1 | 184.85 |
| #2 | 185.86 |

Method: 2010A Sample Name: K1009597-012SD Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:21 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.046 | .4833 | .9493 | 2.0562 | .04863 | .9729 |
| #1 | 2.026 | .4871 | .9376 | 2.0524 | .04850 | .9711 |
| #2 | 2.066 | .4794 | .9610 | 2.0599 | .04876 | .9747 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 20.21 | 18.21 | .1890 | .4884 | .7382 | 4.471 |
| #1 | 20.06 | 18.09 | .1876 | .4883 | .7388 | 4.461 |
| #2 | 20.35 | 18.33 | .1903 | .4885 | .7376 | 4.480 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4665 | 19.54 | .52917 | .9135 | .4817 | 101.8 |
| #1 | .4627 | 19.61 | .52771 | .9099 | .4805 | 101.7 |
| #2 | .4703 | 19.48 | .53064 | .9172 | .4830 | 102.0 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9039 | .0457 | 142.4 | -.0002 | .4878 | .5571 |
| #1 | .8950 | .0458 | 142.4 | -.0025 | .4892 | .5530 |
| #2 | .9127 | .0455 | 142.4 | .0020 | .4864 | .5612 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 14.76 | 1.071 | .00319 | .8888 | .00297 | .06482 |
| #1 | 14.76 | 1.068 | .00411 | .8630 | .00308 | .06497 |
| #2 | 14.75 | 1.074 | .00227 | .9147 | .00286 | .06468 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 185.27 |
| #1 | 185.12 |
| #2 | 185.43 |

Method: 2010A Sample Name: RB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:24 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0104 | .0025 | .0083 | .00076 | .00003 | -.0001 |
| #1 | -.0096 | .0011 | .0010 | .00097 | .00005 | .0000 |
| #2 | .0303 | .0039 | .0155 | .00056 | .00001 | -.0001 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0022 | -.0053 | .0014 | .0000 | .0000 | -.0010 |
| #1 | .0034 | -.0079 | .0013 | .0010 | .0013 | .0008 |
| #2 | .0009 | -.0027 | .0014 | -.0010 | -.0013 | -.0028 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0153 | .00034 | .00017 | .0029 | .0000 | .0287 |
| #1 | -.0123 | .00054 | .00021 | .0049 | .0003 | .0268 |
| #2 | -.0183 | .00013 | .00013 | .0009 | -.0002 | .0305 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0029 | .0021 | .0264 | -.0020 | -.0022 | -.0011 |
| #1 | .0059 | .0037 | .0293 | -.0009 | -.0030 | -.0011 |
| #2 | -.0118 | .0005 | .0235 | -.0030 | -.0013 | -.0010 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0013 | -.0047 | .00091 | .0152 | .00030 | -.00002 |
| #1 | .0053 | -.0050 | .00038 | .0057 | .00021 | -.00003 |
| #2 | -.0027 | -.0044 | .00145 | .0247 | .00038 | -.00001 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.31 |
| #1 | 186.19 |
| #2 | 186.43 |

Method: 2010A Sample Name: K1009161-MB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0072 | -.0034 | .0000 | .00066 | .00006 | -.0005 |
| #1 | .0064 | -.0030 | -.0045 | .00043 | .00001 | -.0006 |
| #2 | .0079 | -.0039 | .0045 | .00088 | .00011 | -.0004 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0010 | .0036 | .0013 | .0001 | -.0012 | .0003 |
| #1 | .0014 | .0012 | .0017 | -.0003 | -.0002 | .0000 |
| #2 | .0006 | .0060 | .0009 | .0005 | -.0021 | .0006 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0001 | .00019 | -.00005 | -.0006 | .0003 | .0168 |
| #1 | .0019 | .00015 | -.00010 | -.0006 | -.0004 | .0199 |
| #2 | -.0018 | .00023 | .00000 | -.0007 | .0009 | .0138 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0029 | .0023 | .0224 | .0011 | -.0029 | -.0011 |
| #1 | .0044 | .0031 | .0227 | -.0037 | -.0004 | -.0009 |
| #2 | -.0103 | .0015 | .0220 | .0060 | -.0055 | -.0013 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1426 | -.0031 | .00238 | .0116 | .00062 | .00002 |
| #1 | .1466 | -.0030 | .00289 | -.0029 | .00068 | .00002 |
| #2 | .1385 | -.0031 | .00188 | .0261 | .00056 | .00003 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.36 |
| #1 | 187.74 |
| #2 | 188.97 |

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1009161 (217456) (092110A)
Run Time: 09/21/10 11:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.033 | 2.434 | 2.614 | 5.0458 | .12269 | .9373 |
| #1 | 5.018 | 2.442 | 2.582 | 5.0585 | .12263 | .9389 |
| #2 | 5.048 | 2.426 | 2.646 | 5.0331 | .12275 | .9357 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 1.232 | 12.50 | .4934 | 1.236 | .6444 | 2.352 |
| #1 | 1.236 | 12.47 | .4974 | 1.238 | .6384 | 2.358 |
| #2 | 1.229 | 12.53 | .4893 | 1.234 | .6504 | 2.346 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.383 | 12.60 | 1.2230 | .9142 | 1.212 | 12.86 |
| #1 | 2.388 | 12.62 | 1.2255 | .9084 | 1.215 | 12.90 |
| #2 | 2.377 | 12.58 | 1.2205 | .9199 | 1.209 | 12.82 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.441 | .6099 | 12.51 | .0110 | 1.207 | 1.235 |
| #1 | 2.473 | .6119 | 12.62 | .0122 | 1.211 | 1.234 |
| #2 | 2.409 | .6080 | 12.39 | .0098 | 1.204 | 1.235 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1374 | -.0009 | .00222 | 2.427 | .00084 | .00260 |
| #1 | .1288 | -.0017 | .00257 | 2.462 | .00088 | .00262 |
| #2 | .1460 | -.0001 | .00187 | 2.393 | .00080 | .00258 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.28 |
| #1 | 187.51 |
| #2 | 189.05 |

Method: 2010A Sample Name: K1009161-001 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0338 | .0134 | .0072 | .25188 | -.00002 | .0094 |
| #1 | .0498 | .0178 | .0082 | .25244 | .00007 | .0090 |
| #2 | .0178 | .0089 | .0061 | .25133 | -.00011 | .0097 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | 35.67 | .0025 | .0005 | -.0017 | 4.591 |
| #1 | .0008 | 35.58 | .0037 | .0003 | -.0006 | 4.618 |
| #2 | .0007 | 35.77 | .0013 | .0007 | -.0028 | 4.563 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0052 | 12.66 | .73764 | .0058 | -.0016 | .9255 |
| #1 | -.0031 | 12.63 | .73203 | .0095 | -.0002 | .9278 |
| #2 | -.0073 | 12.69 | .74325 | .0022 | -.0031 | .9233 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0113 | .0010 | 7.127 | .0080 | -.0016 | .0016 |
| #1 | .0032 | .0015 | 7.136 | .0029 | -.0033 | .0018 |
| #2 | .0194 | .0005 | 7.119 | .0132 | .0002 | .0014 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2763 | 12.00 | .00371 | .0251 | .00751 | .32197 |
| #1 | .2845 | 12.00 | .00357 | .0242 | .00732 | .32143 |
| #2 | .2680 | 12.00 | .00386 | .0261 | .00770 | .32250 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.38 |
| #1 | 188.12 |
| #2 | 188.65 |

Method: 2010A Sample Name: K1009161-001D Operator: JC
Comment: (217456) (092110A) Reprint
Run Time: 09/21/10 13:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0306 | .0123 | .0137 | .24679 | .00001 | .0078 |
| #1 | .0162 | .0079 | .0109 | .24449 | -.00001 | .0081 |
| #2 | .0450 | .0167 | .0164 | .24909 | .00003 | .0074 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0011 | 35.47 | .0019 | .0002 | -.0001 | 4.528 |
| #1 | .0013 | 35.17 | .0030 | -.0006 | .0006 | 4.517 |
| #2 | .0009 | 35.78 | .0008 | .0009 | -.0008 | 4.539 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0016 | 12.56 | .72678 | .0003 | -.0023 | .9275 |
| #1 | .0045 | 12.58 | .71978 | -.0012 | -.0023 | .9458 |
| #2 | -.0014 | 12.54 | .73378 | .0018 | -.0022 | .9092 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0017 | .0003 | 7.014 | .0159 | -.0004 | .0031 |
| #1 | .0121 | -.0005 | 7.026 | .0184 | -.0001 | .0035 |
| #2 | -.0086 | .0011 | 7.002 | .0134 | -.0008 | .0026 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2817 | 11.91 | .00093 | .0446 | .00730 | .31806 |
| #1 | .2958 | 11.93 | .00111 | .0508 | .00719 | .31881 |
| #2 | .2676 | 11.90 | .00074 | .0383 | .00742 | .31731 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 189.62 |
| #1 | 189.51 |
| #2 | 189.72 |

Method: 2010A Sample Name: K1009161-001S Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.029 | .5002 | 1.003 | 2.2828 | .04861 | .9548 |
| #1 | 2.038 | .5088 | .9863 | 2.2792 | .04862 | .9566 |
| #2 | 2.021 | .4915 | 1.019 | 2.2864 | .04860 | .9530 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0497 | 46.39 | .1962 | .4817 | .2443 | 5.561 |
| #1 | .0502 | 46.25 | .1962 | .4804 | .2450 | 5.528 |
| #2 | .0492 | 46.53 | .1962 | .4829 | .2436 | 5.593 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4494 | 23.25 | 1.2024 | .9286 | .4746 | 11.75 |
| #1 | .4476 | 23.22 | 1.2031 | .9216 | .4739 | 11.81 |
| #2 | .4512 | 23.28 | 1.2017 | .9357 | .4754 | 11.69 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .9209 | .0455 | 17.88 | .0132 | .4810 | .4874 |
| #1 | .8951 | .0452 | 17.96 | .0176 | .4762 | .4853 |
| #2 | .9467 | .0458 | 17.81 | .0088 | .4859 | .4894 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2902 | 12.08 | .00164 | .8841 | .00802 | .32483 |
| #1 | .2854 | 12.11 | .00171 | .8923 | .00837 | .32538 |
| #2 | .2950 | 12.04 | .00157 | .8760 | .00768 | .32429 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.22 |
| #1 | 187.48 |
| #2 | 186.95 |

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 11:42 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 5.014 | .0134 | .0004 | 2.4204 | .04846 | .0024 |
| Stddev | .056 | .0097 | .0117 | .0102 | .00025 | .0009 |
| %RSD | 1.125 | 72.14 | 3230. | .41967 | .51876 | 35.93 |
| #1 | 4.974 | .0203 | .0086 | 2.4276 | .04864 | .0031 |
| #2 | 5.054 | .0066 | -.0079 | 2.4133 | .04829 | .0018 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 10.00% | | | 10.000% | 10.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0029 | 24.84 | .0038 | .0011 | .0001 | 23.72 |
| Stddev | .0008 | .27 | .0002 | .0004 | .0004 | .05 |
| %RSD | 27.04 | 1.073 | 6.412 | 33.74 | 563.1 | .1926 |
| #1 | .0024 | 24.65 | .0039 | .0014 | .0004 | 23.76 |
| #2 | .0035 | 25.03 | .0036 | .0009 | -.0002 | 23.69 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 10.00% | | | | 10.00% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0055 | 24.91 | 4.756 | .0048 | -.0016 | 10.09 |
| Stddev | .0023 | .04 | .044 | .0024 | .0018 | .10 |
| %RSD | 42.15 | .1626 | .9249 | 49.32 | 116.3 | 1.008 |
| #1 | -.0038 | 24.94 | 4.787 | .0065 | -.0003 | 10.02 |
| #2 | -.0071 | 24.88 | 4.725 | .0031 | -.0029 | 10.16 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0054 | .0026 | 9.796 | .0019 | .0032 | .0024 |
| Stddev | .0156 | .0039 | .009 | .0073 | .0007 | .0001 |
| %RSD | 289.1 | 150.2 | .0888 | 395.9 | 23.51 | 5.165 |
| #1 | -.0056 | -.0002 | 9.802 | .0070 | .0037 | .0025 |
| #2 | .0165 | .0054 | 9.790 | -.0033 | .0026 | .0023 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 10.00% | | | |

Sample Name: CCVB Run Time: 09/21/10 11:42

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 9.945 | 2.474 | .00225 | .0355 | .50185 | .48168 |
| Stddev | .013 | .006 | .00117 | .0153 | .00499 | .00137 |
| %RSD | .1349 | .2595 | 51.962 | 43.12 | .99446 | .28447 |
| | | | | | | |
| #1 | 9.935 | 2.470 | .00308 | .0463 | .49832 | .48265 |
| #2 | 9.954 | 2.479 | .00142 | .0247 | .50538 | .48071 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 10.00% | 10.00% | | | 10.000% | 10.000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.26 |
| Stddev | 1.43 |
| %RSD | .76500 |
| | |
| #1 | 186.24 |
| #2 | 188.27 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 11:45 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0243 | 2.441 | 2.447 | .00225 | -.00034 | .4941 |
| Stddev | .0034 | .012 | .000 | .00054 | .00007 | .0018 |
| %RSD | 13.85 | .4962 | .0096 | 23.906 | 19.615 | .3646 |
| #1 | .0267 | 2.433 | 2.447 | .00263 | -.00029 | .4928 |
| #2 | .0219 | 2.450 | 2.447 | .00187 | -.00038 | .4954 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4789 | 2.451 | .4822 | .4797 | .4904 | .4937 |
| Stddev | .0031 | .018 | .0027 | .0013 | .0040 | .0042 |
| %RSD | .6575 | .7504 | .5602 | .2720 | .8106 | .8605 |
| #1 | .4767 | 2.438 | .4803 | .4788 | .4876 | .4967 |
| #2 | .4812 | 2.464 | .4841 | .4806 | .4932 | .4907 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.354 | 1.9617 | .96056 | .9510 | .4796 | .0381 |
| Stddev | .012 | .0049 | .00945 | .0094 | .0026 | .0067 |
| %RSD | .5258 | .24766 | .98331 | .9904 | .5369 | 17.62 |
| #1 | 2.346 | 1.9583 | .95389 | .9444 | .4778 | .0428 |
| #2 | 2.363 | 1.9652 | .96724 | .9577 | .4814 | .0333 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.404 | .4815 | .0370 | 2.311 | .4650 | .4738 |
| Stddev | .043 | .0081 | .0000 | .008 | .0054 | .0013 |
| %RSD | 1.786 | 1.690 | .0765 | .3642 | 1.158 | .2783 |
| #1 | 2.374 | .4757 | .0370 | 2.317 | .4612 | .4729 |
| #2 | 2.435 | .4872 | .0371 | 2.305 | .4688 | .4748 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Sample Name: CCVA Run Time: 09/21/10 11:45

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0052 | .0587 | .47921 | 4.676 | .00053 | .00071 |
| Stddev | .0020 | .0026 | .00545 | .004 | .00035 | .00001 |
| %RSD | 38.99 | 4.365 | 1.1363 | .0742 | 66.627 | .89893 |
| | | | | | | |
| #1 | -.0038 | .0606 | .47536 | 4.679 | .00077 | .00071 |
| #2 | -.0066 | .0569 | .48306 | 4.674 | .00028 | .00071 |
| | | | | | | |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.48 |
| Stddev | .22 |
| %RSD | .11504 |
| | |
| #1 | 188.33 |
| #2 | 188.64 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 11:47 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0080 | .0025 | .0117 | .00049 | -.00005 | .0000 |
| Stddev | .0090 | .0172 | .0054 | .00036 | .00013 | .000 |
| %RSD | 113.1 | 689.9 | 45.81 | 73.979 | 280.76 | 668.8 |
| #1 | .0144 | -.0097 | .0079 | .00075 | .00004 | .0001 |
| #2 | .0016 | .0146 | .0155 | .00024 | -.00013 | -.0002 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0003 | -.0021 | .0023 | .0001 | -.0009 | .0031 |
| Stddev | .0002 | .0014 | .0001 | .0011 | .0019 | .0006 |
| %RSD | 73.62 | 63.76 | 4.039 | 1202. | 200.4 | 20.62 |
| #1 | .0001 | -.0031 | .0023 | .0008 | -.0023 | .0036 |
| #2 | .0004 | -.0012 | .0022 | -.0007 | .0004 | .0026 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0047 | .00371 | .00099 | .0037 | -.0004 | .0335 |
| Stddev | .0137 | .00022 | .00001 | .0035 | .0009 | .0136 |
| %RSD | 288.4 | 5.8974 | 1.4488 | 93.99 | 237.5 | 40.56 |
| #1 | .0144 | .00356 | .00100 | .0062 | .0003 | .0239 |
| #2 | -.0049 | .00387 | .00098 | .0012 | -.0010 | .0432 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0007 | .0015 | .0172 | .0072 | -.0025 | -.0009 |
| Stddev | .0010 | .0018 | .0003 | .0018 | .0035 | .0003 |
| %RSD | 141.4 | 125.3 | 2.013 | 24.78 | 137.0 | 27.76 |
| #1 | -.0015 | .0002 | .0170 | .0059 | -.0050 | -.0008 |
| #2 | .0000 | .0028 | .0175 | .0084 | -.0001 | -.0011 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 11:47

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0055 | -.0031 | .00295 | .0108 | .00030 | .00011 |
| Stddev | .0164 | .0018 | .00075 | .0105 | .00016 | .00007 |
| %RSD | 299.7 | 56.46 | 25.564 | 96.38 | 52.695 | 65.505 |
| | | | | | | |
| #1 | -.0061 | -.0019 | .00242 | .0035 | .00019 | .00006 |
| #2 | .0170 | -.0044 | .00349 | .0182 | .00041 | .00017 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.04 |
| Stddev | .01 |
| %RSD | .00646 |
| | |
| #1 | 187.04 |
| #2 | 187.03 |

Method: 2010A Sample Name: K1009161-002 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0273 | .0039 | -.0024 | .18096 | -.00002 | .1772 |
| #1 | .0225 | .0068 | .0007 | .18037 | -.00009 | .1769 |
| #2 | .0321 | .0010 | -.0055 | .18155 | .00005 | .1776 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | 35.10 | .0005 | .0002 | -.0025 | .3034 |
| #1 | .0010 | 34.96 | .0006 | .0002 | -.0018 | .3033 |
| #2 | .0004 | 35.24 | .0005 | .0002 | -.0032 | .3036 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0095 | 11.72 | .04497 | .0005 | .0004 | 4.617 |
| #1 | -.0059 | 11.65 | .04479 | .0009 | -.0003 | 4.636 |
| #2 | -.0132 | 11.79 | .04514 | .0000 | .0011 | 4.598 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0030 | .0021 | 112.0 | .0014 | -.0010 | -.0001 |
| #1 | -.0029 | .0028 | 112.7 | .0037 | .0022 | -.0007 |
| #2 | .0089 | .0015 | 111.4 | -.0009 | -.0042 | .0004 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2265 | 7.658 | .00155 | .0315 | .05079 | .57279 |
| #1 | .2223 | 7.645 | .00106 | .0274 | .05079 | .57465 |
| #2 | .2307 | 7.671 | .00205 | .0356 | .05079 | .57094 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.68 |
| #1 | 188.33 |
| #2 | 189.03 |

Method: 2010A Sample Name: K1009161-003 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 11:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0512 | .0063 | .0038 | .17859 | -.00003 | .1745 |
| #1 | .0497 | .0185 | .0090 | .17767 | .00002 | .1743 |
| #2 | .0528 | -.0059 | -.0013 | .17952 | -.00008 | .1746 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0005 | 34.58 | .0016 | -.0004 | -.0013 | .2968 |
| #1 | .0002 | 34.36 | .0018 | -.0010 | -.0001 | .2965 |
| #2 | .0007 | 34.80 | .0013 | .0001 | -.0024 | .2972 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0028 | 11.66 | .04471 | -.0015 | -.0014 | 4.532 |
| #1 | -.0073 | 11.64 | .04479 | -.0022 | -.0023 | 4.568 |
| #2 | .0018 | 11.67 | .04463 | -.0009 | -.0005 | 4.496 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0059 | .0005 | 109.3 | -.0035 | -.0036 | -.0008 |
| #1 | .0015 | -.0005 | 110.2 | -.0059 | -.0045 | -.0009 |
| #2 | .0103 | .0015 | 108.5 | -.0011 | -.0026 | -.0006 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2063 | 7.548 | .00099 | .0166 | .04896 | .55947 |
| #1 | .1983 | 7.537 | .00146 | .0125 | .04943 | .56157 |
| #2 | .2143 | 7.559 | .00052 | .0207 | .04849 | .55737 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 189.86 |
| #1 | 189.57 |
| #2 | 190.14 |

Method: 2010A Sample Name: K1009161-001 Operator: JC
Comment: DISS (217456) (092110A)
Run Time: 09/21/10 11:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0234 | .0016 | .0237 | .25054 | -.00005 | .0082 |
| #1 | .0146 | .0099 | .0234 | .25042 | -.00003 | .0080 |
| #2 | .0322 | -.0067 | .0240 | .25066 | -.00006 | .0084 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0013 | 36.00 | .0022 | .0000 | -.0024 | 4.520 |
| #1 | .0013 | 35.92 | .0022 | .0000 | -.0014 | 4.506 |
| #2 | .0012 | 36.08 | .0023 | .0000 | -.0033 | 4.534 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0084 | 12.70 | .74098 | .0003 | -.0019 | .9177 |
| #1 | -.0064 | 12.69 | .74528 | .0009 | -.0019 | .9064 |
| #2 | -.0104 | 12.72 | .73669 | -.0002 | -.0019 | .9291 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0091 | .0000 | 7.056 | .0115 | -.0033 | .0023 |
| #1 | .0121 | -.0028 | 7.015 | .0079 | -.0030 | .0021 |
| #2 | .0062 | .0028 | 7.098 | .0151 | -.0036 | .0025 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2655 | 12.10 | .00015 | .0381 | .00700 | .32013 |
| #1 | .2649 | 12.10 | -.00052 | .0258 | .00641 | .32049 |
| #2 | .2661 | 12.10 | .00082 | .0504 | .00759 | .31977 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 190.35 |
| #1 | 190.01 |
| #2 | 190.68 |

Method: 2010A Sample Name: K1009161-002 Operator: JC
Comment: DISS (217456) (092110A)
Run Time: 09/21/10 12:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0153 | .0064 | .0163 | .17751 | -.00001 | .1749 |
| #1 | .0225 | .0107 | .0090 | .17708 | -.00004 | .1740 |
| #2 | .0081 | .0020 | .0235 | .17795 | .00001 | .1758 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0008 | 35.02 | .0005 | .0009 | -.0020 | .2965 |
| #1 | .0010 | 34.86 | .0021 | .0007 | -.0025 | .2978 |
| #2 | .0006 | 35.18 | -.0012 | .0012 | -.0015 | .2952 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0027 | 11.79 | .04611 | .0015 | .0000 | 4.618 |
| #1 | .0019 | 11.78 | .04578 | .0001 | .0001 | 4.582 |
| #2 | -.0073 | 11.80 | .04645 | .0029 | .0000 | 4.653 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0022 | -.0011 | 111.2 | .0004 | -.0027 | .0009 |
| #1 | -.0059 | .0008 | 111.1 | -.0018 | -.0023 | .0010 |
| #2 | .0103 | -.0031 | 111.3 | .0025 | -.0031 | .0009 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2180 | 7.532 | .00013 | .0064 | .05010 | .57174 |
| #1 | .2058 | 7.534 | -.00001 | .0085 | .04997 | .57089 |
| #2 | .2301 | 7.531 | .00027 | .0043 | .05024 | .57258 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.79 |
| #1 | 188.46 |
| #2 | 189.11 |

Method: 2010A Sample Name: K1009161-003 Operator: JC
Comment: DISS (217456) (092110A)
Run Time: 09/21/10 12:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0137 | .0014 | .0015 | .17989 | .00001 | .1799 |
| #1 | .0321 | .0049 | .0084 | .18004 | .00007 | .1788 |
| #2 | -.0047 | -.0020 | -.0054 | .17973 | -.00005 | .1809 |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0010 | 35.66 | .0009 | .0005 | -.0014 | .3011 |
| #1 | .0013 | 35.52 | .0003 | .0007 | -.0010 | .3023 |
| #2 | .0008 | 35.79 | .0016 | .0002 | -.0018 | .2998 |

| Elem | Pb2203 | Mg2025 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0025 | 11.96 | .04712 | -.0013 | -.0005 | 4.732 |
| #1 | .0006 | 12.00 | .04730 | .0005 | -.0010 | 4.765 |
| #2 | -.0055 | 11.91 | .04695 | -.0030 | .0000 | 4.699 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0008 | .0018 | 112.8 | -.0016 | -.0015 | .0003 |
| #1 | .0015 | .0050 | 113.6 | .0013 | -.0019 | .0005 |
| #2 | .0000 | -.0015 | 112.0 | -.0044 | -.0011 | .0001 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1952 | 7.665 | .00068 | .0337 | .05122 | .58411 |
| #1 | .1884 | 7.645 | .00006 | .0402 | .05109 | .58502 |
| #2 | .2020 | 7.685 | .00131 | .0272 | .05134 | .58320 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.54 |
| #1 | 187.73 |
| #2 | 189.34 |

Method: 2010A Sample Name: K1008857-003 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 12:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0199 | .0029 | .0014 | .00039 | .00002 | -.0002 |
| #1 | .0176 | .0048 | -.0003 | .00036 | .00001 | -.0006 |
| #2 | .0223 | .0010 | .0031 | .00042 | .00002 | .0001 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | .0087 | .0020 | .0007 | .0120 | .0002 |
| #1 | .0008 | .0123 | .0028 | .0008 | .0105 | .0004 |
| #2 | .0006 | .0051 | .0011 | .0006 | .0135 | .0000 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0075 | .00084 | .00015 | -.0004 | .0015 | .0308 |
| #1 | -.0059 | .00097 | .00004 | -.0004 | .0024 | .0292 |
| #2 | -.0091 | .00071 | .00025 | -.0003 | .0006 | .0323 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0044 | .0003 | .0423 | .0019 | -.0031 | .0009 |
| #1 | .0088 | .0005 | .0387 | .0028 | -.0046 | .0006 |
| #2 | .0000 | .0002 | .0459 | .0010 | -.0016 | .0012 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .1954 | -.0011 | .00047 | .0074 | .00053 | .00004 |
| #1 | .1933 | -.0006 | -.00033 | -.0029 | .00068 | .00006 |
| #2 | .1975 | -.0016 | .00128 | .0177 | .00039 | .00002 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.44 |
| #1 | 187.68 |
| #2 | 189.20 |

Method: 2010A Sample Name: K1008857-003L Operator: JC
Comment: 1/5 (217456) (092110A)
Run Time: 09/21/10 12:09 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0080 | .0024 | .0017 | .00022 | -.00001 | -.0004 |
| #1 | .0176 | .0019 | .0086 | .00001 | .00000 | -.0005 |
| #2 | -.0016 | .0029 | -.0052 | .00043 | -.00001 | -.0003 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0002 | -.0012 | .0012 | .0007 | .0020 | -.0016 |
| #1 | .0000 | .0036 | .0001 | .0015 | .0032 | -.0019 |
| #2 | .0005 | -.0060 | .0022 | -.0002 | .0007 | -.0013 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0107 | .00018 | -.00001 | .0000 | -.0012 | .0163 |
| #1 | -.0045 | .00019 | -.00008 | -.0006 | -.0011 | -.0004 |
| #2 | -.0168 | .00017 | .00006 | .0005 | -.0013 | .0330 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0000 | .0005 | .0192 | .0027 | -.0017 | .0003 |
| #1 | .0044 | .0024 | .0226 | .0073 | -.0025 | .0003 |
| #2 | -.0044 | -.0015 | .0157 | -.0018 | -.0009 | .0002 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0430 | -.0033 | .00047 | -.0061 | .00025 | -.00001 |
| #1 | .0454 | -.0023 | .00044 | -.0029 | .00030 | .00000 |
| #2 | .0406 | -.0043 | .00050 | -.0093 | .00019 | -.00002 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.06 |
| #1 | 187.53 |
| #2 | 188.60 |

Method: 2010A Sample Name: K1009645-001 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 12:12 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.134 | -.0035 | -.0006 | .02362 | .00002 | .0046 |
| #1 | 2.137 | -.0099 | -.0013 | .02377 | .00000 | .0043 |
| #2 | 2.132 | .0028 | .0001 | .02346 | .00003 | .0049 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0004 | 1.593 | .0192 | .0018 | .0346 | 3.422 |
| #1 | .0003 | 1.573 | .0196 | .0019 | .0348 | 3.409 |
| #2 | .0004 | 1.614 | .0188 | .0018 | .0345 | 3.436 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0054 | .59814 | .06831 | .0025 | .0149 | .7479 |
| #1 | .0111 | .59523 | .06799 | .0024 | .0166 | .7462 |
| #2 | -.0004 | .60106 | .06862 | .0025 | .0133 | .7496 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0004 | -.0006 | .4796 | .0001 | .0095 | .0937 |
| #1 | .0033 | .0001 | .4828 | .0039 | .0116 | .0934 |
| #2 | -.0041 | -.0012 | .4765 | -.0037 | .0073 | .0940 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .3290 | 3.254 | .14743 | .0066 | .00139 | .01065 |
| #1 | .3153 | 3.251 | .14558 | .0087 | .00135 | .01066 |
| #2 | .3428 | 3.257 | .14929 | .0044 | .00143 | .01063 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 186.64 |
| #1 | 186.28 |
| #2 | 187.00 |

Method: 2010A Sample Name: K1009645-002 Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 12:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2589 | -.0001 | .0038 | .00464 | .00002 | .0007 |
| #1 | .2558 | -.0078 | .0038 | .00483 | -.00002 | .0007 |
| #2 | .2620 | .0077 | .0038 | .00445 | .00006 | .0007 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0004 | .1983 | .0041 | .0004 | .0032 | .3860 |
| #1 | .0001 | .1926 | .0036 | .0005 | .0036 | .3874 |
| #2 | .0007 | .2041 | .0045 | .0003 | .0028 | .3845 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0022 | .06786 | .00900 | -.0010 | .0019 | .1033 |
| #1 | .0038 | .06758 | .00897 | -.0004 | .0016 | .0973 |
| #2 | .0005 | .06814 | .00904 | -.0016 | .0023 | .1092 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0051 | -.0002 | .0910 | .0049 | -.0033 | .0821 |
| #1 | -.0044 | -.0018 | .0912 | .0073 | -.0027 | .0822 |
| #2 | -.0058 | .0014 | .0908 | .0026 | -.0039 | .0819 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .2099 | .4045 | .02367 | -.0155 | .00078 | .00857 |
| #1 | .2018 | .4080 | .02292 | -.0175 | .00058 | .00859 |
| #2 | .2180 | .4011 | .02442 | -.0134 | .00097 | .00855 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.47 |
| #1 | 187.84 |
| #2 | 189.10 |

Method: 2010A Sample Name: RB Operator: JC
Comment: (217456) (092110A)
Run Time: 09/21/10 12:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0343 | .0009 | .0010 | .00027 | -.00003 | -.0014 |
| #1 | .0304 | .0019 | -.0107 | .00026 | -.00004 | -.0014 |
| #2 | .0383 | .0000 | .0128 | .00029 | -.00001 | -.0014 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0006 | .0024 | .0025 | .0005 | -.0010 | -.0020 |
| #1 | .0005 | .0036 | .0037 | -.0003 | .0010 | -.0016 |
| #2 | .0007 | .0012 | .0013 | .0014 | -.0029 | -.0024 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0057 | -.00002 | .00015 | -.0011 | -.0003 | .0084 |
| #1 | .0117 | -.00004 | .00010 | -.0013 | .0003 | .0141 |
| #2 | -.0004 | .00000 | .00021 | -.0010 | -.0009 | .0027 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0059 | .0018 | .0128 | -.0048 | -.0039 | .0000 |
| #1 | -.0015 | -.0002 | .0150 | -.0070 | -.0047 | .0002 |
| #2 | .0133 | .0037 | .0106 | -.0027 | -.0030 | -.0003 |

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0117 | -.0025 | .00120 | .0129 | .00004 | -.00001 |
| #1 | .0132 | -.0021 | .00146 | .0099 | .00028 | -.00002 |
| #2 | .0102 | -.0029 | .00094 | .0159 | -.00021 | .00000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.10 |
| #1 | 186.38 |
| #2 | 187.82 |

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 09/21/10 12:21 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 4.896 | .0080 | .0010 | 2.4228 | .04716 | .0016 |
| Stddev | .053 | .0007 | .0107 | .0220 | .00006 | .0003 |
| %RSD | 1.085 | 8.499 | 1071. | .90579 | .12740 | 18.12 |
| #1 | 4.859 | .0085 | .0086 | 2.4073 | .04720 | .0014 |
| #2 | 4.934 | .0075 | -.0066 | 2.4383 | .04712 | .0019 |
| Check ? | QC Pass | None | None | QC Pass | QC Pass | None |
| Value | 5.000 | | | 2.5000 | .05000 | |
| Range | 10.00% | | | 10.000% | 10.000% | |

| Elem | Cd2265 | Ca2112 | Cr2677 | Co2286 | Cu3247 | Fe2714 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0031 | 24.72 | .0014 | .0002 | .0001 | 23.30 |
| Stddev | .0006 | .20 | .0000 | .0002 | .0004 | .10 |
| %RSD | 19.80 | .8225 | 3.138 | 105.5 | 637.2 | .4343 |
| #1 | .0027 | 24.57 | .0014 | .0004 | .0004 | 23.23 |
| #2 | .0036 | 24.86 | .0013 | .0001 | -.0002 | 23.37 |
| Check ? | None | QC Pass | None | None | None | QC Pass |
| Value | | 25.00 | | | | 25.00 |
| Range | | 10.00% | | | | 10.00% |

| Elem | Pb2203 | Mg2025 | Mn2939 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | -.0090 | 24.79 | 4.695 | -.0012 | -.0022 | 9.726 |
| Stddev | .0039 | .13 | .006 | .0006 | .0001 | .118 |
| %RSD | 43.29 | .5151 | .1279 | 50.90 | 6.158 | 1.212 |
| #1 | -.0117 | 24.70 | 4.699 | -.0016 | -.0021 | 9.809 |
| #2 | -.0062 | 24.88 | 4.691 | -.0008 | -.0023 | 9.643 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 25.00 | 5.000 | | | 10.00 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0002 | .0005 | 9.566 | .0171 | -.0003 | .0023 |
| Stddev | .0104 | .0023 | .080 | .0003 | .0005 | .0001 |
| %RSD | 4809. | 473.2 | .8374 | 1.526 | 165.9 | 5.593 |
| #1 | -.0072 | -.0011 | 9.623 | .0173 | .0001 | .0022 |
| #2 | .0076 | .0021 | 9.509 | .0169 | -.0007 | .0024 |
| Check ? | None | None | QC Pass | None | None | None |
| Value | | | 10.00 | | | |
| Range | | | 10.00% | | | |

Sample Name: CCVB Run Time: 09/21/10 12:21

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 9.939 | 2.454 | .00136 | .0161 | .48829 | .46668 |
| Stddev | .050 | .013 | .00028 | .0058 | .00551 | .00121 |
| %RSD | .5070 | .5465 | 20.881 | 36.10 | 1.1280 | .25837 |
| | | | | | | |
| #1 | 9.904 | 2.444 | .00116 | .0202 | .49219 | .46754 |
| #2 | 9.975 | 2.463 | .00156 | .0120 | .48440 | .46583 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | None | None | QC Pass | QC Pass |
| Value | 10.00 | 2.500 | | | .50000 | .50000 |
| Range | 10.00% | 10.00% | | | 10.000% | 10.000% |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 188.84 |
| Stddev | .32 |
| %RSD | .16815 |
| | |
| #1 | 189.06 |
| #2 | 188.61 |

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 09/21/10 12:24 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0179 | 2.424 | 2.500 | .00202 | -.00013 | .4886 |
| Stddev | .0101 | .002 | .014 | .00054 | .00008 | .0004 |
| %RSD | 56.62 | .0650 | .5706 | 26.445 | 58.196 | .0865 |
| #1 | .0107 | 2.425 | 2.490 | .00240 | -.00008 | .4883 |
| #2 | .0251 | 2.423 | 2.510 | .00165 | -.00018 | .4889 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4839 | 2.534 | .4841 | .4772 | .5017 | .4894 |
| Stddev | .0021 | .034 | .0006 | .0013 | .0031 | .0121 |
| %RSD | .4308 | 1.340 | .1154 | .2678 | .6110 | 2.481 |
| #1 | .4824 | 2.510 | .4837 | .4781 | .4995 | .4980 |
| #2 | .4854 | 2.558 | .4845 | .4763 | .5038 | .4808 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.319 | 1.9352 | .97326 | .9328 | .4740 | .0171 |
| Stddev | .014 | .0013 | .00042 | .0083 | .0002 | .0062 |
| %RSD | .6039 | .06927 | .04365 | .8928 | .0472 | 36.28 |
| #1 | 2.329 | 1.9361 | .97296 | .9269 | .4741 | .0214 |
| #2 | 2.309 | 1.9342 | .97356 | .9387 | .4738 | .0127 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.352 | .4787 | .0366 | Q 2.245 | .4538 | .4819 |
| Stddev | .015 | .0014 | .0016 | .004 | .0025 | .0002 |
| %RSD | .6502 | .2974 | 4.296 | .190 | .5584 | .0472 |
| #1 | 2.341 | .4777 | .0377 | 2.248 | .4520 | .4817 |
| #2 | 2.363 | .4797 | .0354 | 2.242 | .4556 | .4820 |
| Check ? | QC Pass | QC Pass | None | QC Fail | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Recur
BC
9/21/10

Sample Name: CCVA Run Time: 09/21/10 12:24

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0046 | .0587 | .47226 | 4.696 | .00086 | .00080 |
| Stddev | .0113 | .0031 | .00191 | .048 | .00034 | .00007 |
| %RSD | 246.4 | 5.276 | .40364 | 1.016 | 39.437 | 8.3195 |
| #1 | -.0034 | .0565 | .47361 | 4.730 | .00110 | .00084 |
| #2 | .0126 | .0609 | .47091 | 4.662 | .00062 | .00075 |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 190.73 |
| Stddev | .13 |
| %RSD | .06709 |
| #1 | 190.64 |
| #2 | 190.82 |

Method: 2010A Sample Name: CCVA Operator:
Comment: Rerun
Run Time: 09/21/10 12:27 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0107 | 2.438 | 2.472 | .00205 | -.00024 | .4890 |
| Stddev | .0023 | .014 | .003 | .00015 | .00007 | .0018 |
| %RSD | 21.55 | .5839 | .1355 | 7.3742 | 28.252 | .3653 |
| #1 | .0090 | 2.428 | 2.470 | .00216 | -.00028 | .4877 |
| #2 | .0123 | 2.448 | 2.474 | .00194 | -.00019 | .4902 |
| Check ? | None | QC Pass | QC Pass | None | None | QC Pass |
| Value | | 2.500 | 2.500 | | | .5000 |
| Range | | 10.00% | 10.00% | | | 10.00% |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .4784 | 2.511 | .4805 | .4722 | .5025 | .4796 |
| Stddev | .0003 | .012 | .0023 | .0037 | .0006 | .0019 |
| %RSD | .0592 | .4930 | .4876 | .7810 | .1218 | .4046 |
| #1 | .4786 | 2.520 | .4788 | .4696 | .5020 | .4782 |
| #2 | .4782 | 2.502 | .4821 | .4748 | .5029 | .4810 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .5000 | 2.500 | .5000 | .5000 | .5000 | .5000 |
| Range | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.307 | 1.9303 | .96628 | .9419 | .4705 | .0312 |
| Stddev | .013 | .0033 | .00263 | .0025 | .0006 | .0080 |
| %RSD | .5454 | .17111 | .27227 | .2670 | .1360 | 25.63 |
| #1 | 2.299 | 1.9280 | .96442 | .9402 | .4700 | .0369 |
| #2 | 2.316 | 1.9326 | .96814 | .9437 | .4709 | .0256 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | None |
| Value | 2.500 | 2.0000 | 1.0000 | 1.000 | .5000 | |
| Range | 10.00% | 10.000% | 10.000% | 10.00% | 10.00% | |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | 2.349 | .4821 | .0344 | 2.259 | .4566 | .4788 |
| Stddev | .017 | .0021 | .0002 | .018 | .0029 | .0003 |
| %RSD | .7268 | .4395 | .6399 | .7764 | .6280 | .0557 |
| #1 | 2.337 | .4806 | .0342 | 2.247 | .4545 | .4787 |
| #2 | 2.361 | .4836 | .0346 | 2.271 | .4586 | .4790 |
| Check ? | QC Pass | QC Pass | None | QC Pass | QC Pass | QC Pass |
| Value | 2.500 | .5000 | | 2.500 | .5000 | .5000 |
| Range | 10.00% | 10.00% | | 10.00% | 10.00% | 10.00% |

Sample Name: CCVA Run Time: 09/21/10 12:27 Pecun

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0037 | .0574 | .47346 | 4.668 | .00071 | .00078 |
| Stddev | .0004 | .0031 | .00334 | .037 | .00015 | .00001 |
| %RSD | 11.54 | 5.479 | .70445 | .7879 | 21.542 | 1.6364 |
| | | | | | | |
| #1 | .0040 | .0551 | .47110 | 4.642 | .00082 | .00078 |
| #2 | .0034 | .0596 | .47582 | 4.695 | .00060 | .00077 |
| | | | | | | |
| Check ? | None | None | QC Pass | QC Pass | None | None |
| Value | | | .50000 | 5.000 | | |
| Range | | | 10.000% | 10.00% | | |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 190.57 |
| Stddev | .21 |
| %RSD | .11245 |
| | |
| #1 | 190.72 |
| #2 | 190.42 |

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 09/21/10 12:30 Type: QC Mode: CONC Corr.Fact: 1.000000

| Elem | Al2373 | Sb2068 | As1890 | Ba2335 | Be3130 | B_2497 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0127 | .0060 | -.0004 | .00068 | .00002 | -.0004 |
| Stddev | .0090 | .0028 | .0088 | .00010 | .00003 | .0001 |
| %RSD | 70.95 | 47.54 | 2497. | 14.050 | 212.86 | 18.82 |
| #1 | .0191 | .0080 | .0059 | .00061 | .00004 | -.0003 |
| #2 | .0064 | .0040 | -.0066 | .00075 | -.00001 | -.0004 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .00000 | .00000 | .0000 |
| Range | ±.0500 | ±.0500 | ±.1000 | ±.00500 | ±.00500 | ±.0500 |

| Elem | Cd2265 | Ca3179 | Cr2677 | Co2286 | Cu3247 | Fe2599 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0001 | .0039 | .0006 | .0003 | -.0004 | .0042 |
| Stddev | .0001 | .0031 | .0003 | .0008 | .0002 | .0007 |
| %RSD | 85.72 | 79.34 | 58.53 | 281.6 | 55.69 | 17.35 |
| #1 | .0000 | .0017 | .0003 | .0008 | -.0006 | .0047 |
| #2 | .0002 | .0060 | .0008 | -.0003 | -.0002 | .0036 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.0050 | ±.0500 | ±.0050 | ±.0100 | ±.0100 | ±.0200 |

| Elem | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2316 | K_7664 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0047 | .00429 | .00110 | .0067 | .0013 | .0074 |
| Stddev | .0051 | .00001 | .00006 | .0042 | .0013 | .0082 |
| %RSD | 109.9 | .17553 | 5.7213 | 62.72 | 97.28 | 109.6 |
| #1 | .0010 | .00428 | .00115 | .0096 | .0022 | .0132 |
| #2 | .0083 | .00429 | .00106 | .0037 | .0004 | .0017 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .00000 | .00000 | .0000 | .0000 | .0000 |
| Range | ±.0500 | ±.02000 | ±.00500 | ±.0100 | ±.0200 | ±.4000 |

| Elem | Se1960 | Ag3280 | Na5895 | Sn1899 | V_3102 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0007 | .0039 | .0162 | .0030 | -.0035 | -.0005 |
| Stddev | .0073 | .0002 | .0008 | .0061 | .0018 | .0004 |
| %RSD | 985.4 | 5.969 | 4.830 | 199.6 | 50.41 | 75.48 |
| #1 | .0059 | .0041 | .0157 | .0073 | -.0023 | -.0002 |
| #2 | -.0044 | .0037 | .0168 | -.0013 | -.0048 | -.0008 |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| Range | ±.1000 | ±.0100 | ±.2000 | ±.0500 | ±.0100 | ±.0100 |

Sample Name: CCB Run Time: 09/21/10 12:30

| Elem | P_2149 | Si2516 | Ti3234 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | .0091 | -.0027 | .00041 | .0002 | .00025 | .00009 |
| Stddev | .0018 | .0012 | .00172 | .0044 | .00012 | .00005 |
| %RSD | 20.06 | 44.90 | 418.54 | 2152. | 47.234 | 52.379 |
| | | | | | | |
| #1 | .0104 | -.0035 | -.00081 | -.0029 | .00017 | .00013 |
| #2 | .0078 | -.0018 | .00163 | .0033 | .00033 | .00006 |
| | | | | | | |
| Check ? | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass | QC Pass |
| Value | .0000 | .0000 | .00000 | .0000 | .00000 | .00000 |
| Range | ±.2000 | ±.2000 | ±.01000 | ±.2000 | ±.01000 | ±.01000 |

| Int. Std. | Sc3572 |
|---|---|
| Units | Cts/S |
| Avg | 187.65 |
| Stddev | .43 |
| %RSD | .23149 |
| | |
| #1 | 187.35 |
| #2 | 187.96 |

Service Request # K1008857 (#3)(Ti)
Instrument ID# K-ICP-AES-03

# ICP-OES Data Review Form

| | Yes | No |
|---|---|---|
| 1. Standardization completed | ✓ | |
| 2. ICV within 10 % of true value | ✓ | |
| 3. ICB below MRL | ✓ | |
| 4. CRI standard analyzed. | ✓ | |
| 5. ICS standards within 20% of true value | ✓ | |
| 6. All preceding CCVs within 10 % of true value | ✓ | |
| 7. Following CCV within 10 % of true value | ✓ | |
| 8. Bracketing CCBs below MRL | ✓ | |
| 9. Method Blank below MRL | ✓ | |
| 10. MS-MSD or Dup-MS and LCS within CAS control limits | ✓ | |
| 11. All analytes within instrument linear range | ✓ | |
| 12. Adequate rinse out time allowed between samples to eliminate memory effect | ✓ | |

Comments:
StarLIMS Run # 218254 Saved under 092710AICP03
Report Cd2265, Cu3273, Zn2062.
Don't report LL K

Primary Review by JC Date 9/27/10

Secondary Review by [illegible] Date 9/27/10

Sample Name: BLK Acquired: 9/27/2010 9:53:25 Type: Cal
Method: 10C2007(v27) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0004** | **-95.39** | **7.527** | **5.517** | **.0662** | **-1.3483** | **39.82** |
| Stddev | .0000 | 17.70 | 1.008 | 1.540 | .0038 | 1.4133 | .98 |
| %RSD | 9.995 | 18.56 | 13.40 | 27.92 | 5.768 | 104.83 | 2.459 |
| #1 | .0004 | -82.87 | 6.814 | 4.428 | .0635 | -2.3477 | 40.51 |
| #2 | .0004 | -107.9 | 8.240 | 6.606 | .0689 | -.34888 | 39.12 |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.0003** | **.0005** | **.0026** | **.0689** | **.0000** | **.0017** | **-.0039** |
| Stddev | .0007 | .0004 | .0039 | .0025 | .0000 | .0001 | .0023 |
| %RSD | 190.7 | 75.62 | 151.5 | 3.650 | 448.3 | 3.712 | 57.59 |
| #1 | .0001 | .0008 | -.0002 | .0671 | .0000 | .0017 | -.0055 |
| #2 | -.0008 | .0002 | .0054 | .0707 | .0000 | .0018 | -.0023 |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **30.43** | **.0041** | **.0011** | **.0011** | **.0049** | **7.000** | **.0013** |
| Stddev | 3.41 | .0014 | .0000 | .0011 | .0008 | 18.17 | .0001 |
| %RSD | 11.21 | 33.95 | 3.321 | 98.62 | 16.96 | 259.6 | 9.196 |
| #1 | 28.02 | .0051 | .0010 | .0019 | .0043 | 19.85 | .0014 |
| #2 | 32.84 | .0031 | .0011 | .0003 | .0055 | -5.850 | .0013 |

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0000** | **.0005** | **.0012** | **136.4** | **1.391** | **-42.48** | **46.29** |
| Stddev | .0000 | .0002 | .0003 | .2 | .929 | 11.33 | 20.80 |
| %RSD | 130.6 | 34.41 | 27.86 | .1815 | 66.76 | 26.67 | 44.94 |
| #1 | .0001 | .0006 | .0010 | 136.2 | 2.048 | -34.47 | 31.58 |
| #2 | .0000 | .0004 | .0015 | 136.6 | .7345 | -50.49 | 61.00 |

Sample Name: BLK Acquired: 9/27/2010 9:53:25 Type: Cal
Method: 10C2007(v27) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.0012** | **.0006** | **.0051** | **21.90** | **8.174** | **17.15** | **.0016** |
| Stddev | .0007 | .0001 | .0001 | .98 | .042 | 2.38 | .0000 |
| %RSD | 56.38 | 20.29 | 2.425 | 4.476 | .5090 | 13.85 | 3.022 |
| #1 | .0007 | .0005 | .0050 | 22.59 | 8.203 | 18.83 | .0017 |
| #2 | .0017 | .0007 | .0051 | 21.21 | 8.144 | 15.47 | .0016 |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **-.0030** | **-13.80** | **-.00529** |
| Stddev | .0009 | 22.56 | .00485 |
| %RSD | 31.31 | 163.5 | 91.671 |
| #1 | -.0037 | -29.75 | -.00186 |
| #2 | -.0023 | 2.150 | -.00872 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5656.0 | 113230. | 2705.6 | 1429.7 |
| Stddev | 3.0 | 359. | 13.0 | 4.1 |
| %RSD | .05381 | .31686 | .48154 | .28495 |
| #1 | 5653.9 | 113490. | 2714.8 | 1426.8 |
| #2 | 5658.2 | 112980. | 2696.4 | 1432.6 |

9/27/10

Sample Name: STD A  Acquired: 9/27/2010 9:56:35  Type: Cal
Method: 10C2007(v27)  Mode: IR  Corr. Factor: 1.000000
User: admin  :  :  :
Comment: ICP7-96-C

| Elem | Al1670 | Sb2068 | Be2348 | B_2496 | Cd2144 | Cd2265 | Ca3933 | Cr2677 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.3423** | **504.1** | **60018.** | **4023.** | **12.39** | **2.746** | **11.95** | **.1188** |
| Stddev | .0000 | .9 | 177. | 40. | .02 | .001 | .02 | .0005 |
| %RSD | .0145 | .1875 | .29462 | .9826 | .1283 | .0291 | .1799 | .4567 |
| #1 | .3422 | 503.5 | 60143. | 4051. | 12.38 | 2.747 | 11.94 | .1184 |
| #2 | .3423 | 504.8 | 59893. | 3995. | 12.40 | 2.746 | 11.97 | .1192 |

| Elem | Co2307 | Cu2247 | Cu3273 | Pb2203 | Mg2795 | Mn2576 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.7832** | **1.750** | **11710.** | **.7643** | **6.800** | **.5425** | **.6162** | **.9564** |
| Stddev | .0016 | .007 | 39. | .0002 | .013 | .0015 | .0006 | .0009 |
| %RSD | .2049 | .3837 | .3337 | .0216 | .1845 | .2803 | .1033 | .0930 |
| #1 | .7821 | 1.746 | 11730. | .7642 | 6.809 | .5414 | .6167 | .9570 |
| #2 | .7844 | 1.755 | 11680. | .7644 | 6.792 | .5436 | .6158 | .9558 |

| Elem | Se1960 | Ag3280 | Sn1899 | V_2924 | Zn2062 | Zn2138 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **399.3** | **14970.** | **.5323** | **.1169** | **3.702** | **11800.** | **.4356** | **.4131** |
| Stddev | 3.7 | 28. | .0022 | .0010 | .013 | 31. | .0017 | .0025 |
| %RSD | .9158 | .1875 | .4194 | .8625 | .3400 | .2610 | .3788 | .6075 |
| #1 | 401.9 | 14990. | .5307 | .1162 | 3.693 | 11820. | .4345 | .4113 |
| #2 | 396.8 | 14950. | .5339 | .1176 | 3.711 | 11780. | .4368 | .4148 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5779.3 | 115630. | 2767.3 | 1469.6 |
| Stddev | 7.9 | 766. | 10.2 | 6.3 |
| %RSD | .13669 | .66264 | .37003 | .42825 |
| #1 | 5784.9 | 116170. | 2760.1 | 1474.1 |
| #2 | 5773.8 | 115090. | 2774.6 | 1465.2 |

Sample Name: STD B Acquired: 9/27/2010 9:59:30 Type: Cal
Method: 10C2007(v27) Mode: IR Corr. Factor: 1.000000
User: admin : : :
Comment: ICP8-1-A

| Elem | Al3944 | As1890 | Ba4554 | Ca3158 | Fe2599 | Mg2790 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **112600.** | **1499.** | **113.0** | **3.970** | **5.782** | **1.060** |
| Stddev | 64. | . | .1 | .032 | .037 | .001 |
| %RSD | .0569 | .0113 | .0657 | .8084 | .6461 | .0555 |
| #1 | 112700. | 1499. | 112.9 | 3.947 | 5.756 | 1.060 |
| #2 | 112600. | 1499. | 113.0 | 3.993 | 5.809 | 1.061 |

| Elem | Mg2852 | Mn2605 | K_7664 | Na5895 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | R **37910.** | **.0361** | **4887.** | **14370.** | **13160.** | **5226.** |
| Stddev | 111. | .0001 | 28. | 32. | 6. | 8. |
| %RSD | .2938 | .3185 | .5645 | .2254 | .0450 | .1460 |
| #1 | 37830. | .0360 | 4867. | 14350. | 13160. | 5220. |
| #2 | 37990. | .0361 | 4906. | 14400. | 13170. | 5231. |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | **12720.** | **23.443** |
| Stddev | 112. | .159 |
| %RSD | .8820 | .67818 |
| #1 | 12640. | 23.330 |
| #2 | 12800. | 23.555 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5752.2 | 114520. | 2776.7 | 1458.3 |
| Stddev | 3.7 | 264. | 5.2 | 2.7 |
| %RSD | .06414 | .23054 | .18856 | .18699 |
| #1 | 5754.8 | 114330. | 2780.4 | 1456.4 |
| #2 | 5749.6 | 114700. | 2773.0 | 1460.3 |

Sample Name: ICV1200.7 Acquired: 9/27/2010 10:02:58 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-92-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.365** | **4.924** | **2.508** | **2.566** | **5.081** | **.12750** | **.0010** | **1.269** |
| Stddev | .010 | .003 | .002 | .002 | .014 | .00037 | .0004 | .002 |
| %RSD | .2207 | .0518 | .0769 | .0618 | .2783 | .28827 | 40.90 | .1434 |
| #1 | 4.358 | 4.925 | 2.507 | 2.567 | 5.071 | .12724 | .0013 | 1.267 |
| #2 | 4.372 | 4.922 | 2.510 | 2.564 | 5.091 | .12776 | .0007 | 1.270 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.269** | **12.74** | **12.55** | **.5097** | **1.273** | **.6252** | **.6560** | **2.567** |
| Stddev | .000 | .06 | .08 | .0009 | .001 | .0004 | .0007 | .003 |
| %RSD | .0191 | .4449 | .6750 | .1707 | .0911 | .0675 | .1035 | .0990 |
| #1 | 1.269 | 12.70 | 12.61 | .5091 | 1.272 | .6249 | .6555 | 2.565 |
| #2 | 1.269 | 12.78 | 12.49 | .5103 | 1.274 | .6255 | .6565 | 2.569 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **2.553** | **12.55** | **12.23** | **12.56** | **1.277** | **1.253** | **2.039** | **1.266** |
| Stddev | .004 | .10 | .02 | .11 | .001 | .007 | .003 | .002 |
| %RSD | .1511 | .7582 | .1457 | .8532 | .0361 | .5810 | .1291 | .1902 |
| #1 | 2.550 | 12.48 | 12.22 | 12.48 | 1.277 | 1.248 | 2.037 | 1.264 |
| #2 | 2.555 | 12.61 | 12.24 | 12.63 | 1.278 | 1.258 | 2.041 | 1.268 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICV1200.7 Acquired: 9/27/2010 10:02:58 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP7-92-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.36** | **2.514** | **.6406** | **12.30** | **.0004** | **1.303** | **1.248** | **1.266** |
| Stddev | .10 | .008 | .0013 | .17 | .0000 | .001 | .001 | .000 |
| %RSD | .8080 | .3115 | .2085 | 1.353 | 3.966 | .0836 | .0705 | .0351 |
| #1 | 12.29 | 2.520 | .6397 | 12.18 | .0004 | 1.304 | 1.248 | 1.265 |
| #2 | 12.43 | 2.509 | .6416 | 12.41 | .0004 | 1.302 | 1.249 | 1.266 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0092** | **.0025** | **2.039** | **2.597** | **-.0019** | **.00054** |
| Stddev | .0000 | .0202 | .004 | .000 | .0002 | .00018 |
| %RSD | .1614 | 804.5 | .1978 | .0051 | 9.223 | 33.529 |
| #1 | -.0092 | .0168 | 2.042 | 2.598 | -.0017 | .00067 |
| #2 | -.0092 | -.0118 | 2.036 | 2.597 | -.0020 | .00041 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5755.0** | **115420.** | **2765.8** | **1466.4** |
| Stddev | 3.2 | 156. | 11.7 | .5 |
| %RSD | .05527 | .13549 | .42466 | .03405 |
| #1 | 5757.2 | 115310. | 2757.5 | 1466.8 |
| #2 | 5752.7 | 115530. | 2774.1 | 1466.1 |

Sample Name: ICVB1200.7 Acquired: 9/27/2010 10:06:08 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP8-1-C

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9941** | **.9652** | **-.0002** | **.0000** | **-.0007** | **.00001** | **2.018** | **.0000** |
| Stddev | .0015 | .0016 | .0016 | .0001 | .0005 | .00003 | .009 | .0000 |
| %RSD | .1522 | .1685 | 974.7 | 521.6 | 71.91 | 402.68 | .4417 | 19.91 |
| #1 | .9931 | .9641 | .0009 | .0000 | -.0003 | -.00001 | 2.012 | .0000 |
| #2 | .9952 | .9664 | -.0013 | .0001 | -.0011 | .00003 | 2.024 | .0001 |
| Check ? | Chk Pass | None | None | None | None | None | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **5.162** | **5.160** | **-.0004** | **-.0002** | **.0004** | **-.0007** | **10.08** |
| Stddev | .0000 | .013 | .035 | .0003 | .0004 | .0002 | .0003 | .01 |
| %RSD | 4.927 | .2603 | .6804 | 70.19 | 158.1 | 51.90 | 47.32 | .0723 |
| #1 | -.0001 | 5.152 | 5.135 | -.0002 | -.0005 | .0005 | -.0005 | 10.08 |
| #2 | -.0002 | 5.171 | 5.185 | -.0006 | .0000 | .0002 | -.0009 | 10.07 |
| Check ? | None | None | Chk Pass | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **4.909** | **4.991** | **5.062** | **9.535** | **10.04** | **.0023** | **-.0005** |
| Stddev | .0008 | .131 | .003 | .021 | .040 | .06 | .0004 | .0001 |
| %RSD | 90.61 | 2.668 | .0507 | .4191 | .4184 | .6137 | 19.07 | 17.81 |
| #1 | -.0014 | 4.816 | 4.989 | 5.077 | 9.563 | 10.08 | .0026 | -.0005 |
| #2 | -.0003 | 5.002 | 4.993 | 5.047 | 9.507 | 9.997 | .0020 | -.0004 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICVB1200.7 Acquired: 9/27/2010 10:06:08 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: ICP8-1-C

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0428** | **-.0007** | **.0000** | **8.187** | **4.955** | **.0097** | **.0007** | **.0008** |
| Stddev | .0134 | .0002 | .0003 | .013 | .004 | .0000 | .0001 | .0000 |
| %RSD | 31.26 | 28.31 | 815.2 | .1545 | .0780 | .1715 | 10.15 | .2746 |
| #1 | -.0334 | -.0005 | .0003 | 8.196 | 4.952 | .0097 | .0008 | .0008 |
| #2 | -.0523 | -.0008 | -.0002 | 8.178 | 4.958 | .0097 | .0007 | .0008 |
| Check ? | None | None | None | None | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **5.027** | **5.160** | **.0007** | **.0000** | **1.996** | **1.9981** |
| Stddev | .014 | .031 | .0000 | .000 | .002 | .0010 |
| %RSD | .2794 | .6087 | 3.569 | 1715. | .1096 | .04947 |
| #1 | 5.037 | 5.182 | .0007 | .0003 | 1.998 | 1.9988 |
| #2 | 5.017 | 5.138 | .0007 | -.0003 | 1.995 | 1.9974 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5755.5 | 114830. | 2800.0 | 1469.3 |
| Stddev | 16.1 | 529. | 21.4 | 4.5 |
| %RSD | .27974 | .46028 | .76356 | .30864 |
| #1 | 5766.9 | 114460. | 2815.2 | 1472.5 |
| #2 | 5744.1 | 115210. | 2784.9 | 1466.1 |

Sample Name: ICB Acquired: 9/27/2010 10:10:14 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0002** | **.0015** | **-.0010** | **-.0010** | **-.00002** | **.0057** | **.0000** |
| Stddev | .0000 | .0027 | .0013 | .0007 | .0002 | .00004 | .0021 | .000 |
| %RSD | 12.32 | 1071. | 87.73 | 67.37 | 18.50 | 239.58 | 36.16 | 196.6 |
| #1 | .0000 | .0021 | .0006 | -.0005 | -.0011 | .00001 | .0043 | -.0001 |
| #2 | .0000 | -.0016 | .0024 | -.0015 | -.0009 | -.00005 | .0072 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0042** | **.0002** | **.0002** | **-.0002** | **.0006** | **.0000** | **-.0030** |
| Stddev | .0001 | .0054 | .0001 | .0002 | .0000 | .0002 | .0004 | .0000 |
| %RSD | 156.4 | 128.4 | 44.56 | 132.3 | 2.224 | 26.75 | 1426. | .0453 |
| #1 | -.0001 | -.0004 | .0003 | .0003 | -.0002 | .0005 | .0003 | -.0030 |
| #2 | .0000 | -.0080 | .0002 | .0000 | -.0002 | .0007 | -.0003 | -.0030 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0116** | **.0002** | **-.0007** | **.0005** | **-.0010** | **.0003** | **-.0002** |
| Stddev | .0005 | .0045 | .0001 | .0021 | .0000 | .0004 | .0003 | .0001 |
| %RSD | 132.3 | 38.52 | 40.14 | 296.2 | 3.439 | 36.32 | 79.99 | 47.61 |
| #1 | .0008 | -.0148 | .0002 | -.0022 | .0005 | -.0012 | .0005 | -.0001 |
| #2 | .0000 | -.0085 | .0003 | .0008 | .0005 | -.0007 | .0001 | -.0003 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: ICB Acquired: 9/27/2010 10:10:14 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0476** | **.0006** | **.0003** | **.0163** | **.0006** | **.0003** | **-.0001** | **.0000** |
| Stddev | .0019 | .0024 | .0000 | .0089 | .0005 | .0001 | .0001 | .0001 |
| %RSD | 4.067 | 417.0 | 1.739 | 54.28 | 82.26 | 32.18 | 159.1 | 556.5 |
| #1 | -.0489 | -.0011 | .0003 | .0226 | .0002 | .0002 | -.0001 | .0000 |
| #2 | -.0462 | .0023 | .0003 | .0100 | .0009 | .0004 | .0000 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **-.0206** | **.0004** | **-.0018** | **-.0025** | **.00001** |
| Stddev | .0020 | .0230 | .0001 | .0004 | .0000 | .00019 |
| %RSD | 251.9 | 111.6 | 35.67 | 22.36 | .2179 | 2138.5 |
| #1 | .0006 | -.0043 | .0003 | -.0021 | -.0026 | .00014 |
| #2 | -.0022 | -.0368 | .0005 | -.0015 | -.0025 | -.00012 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5756.0 | 115680. | 2740.7 | 1452.4 |
| Stddev | 13.7 | 346. | 10.7 | 2.7 |
| %RSD | .23857 | .29946 | .38882 | .18717 |
| #1 | 5746.3 | 115440. | 2748.2 | 1450.4 |
| #2 | 5765.7 | 115930. | 2733.1 | 1454.3 |

Sample Name: CCVA1 Acquired: 9/27/2010 10:14:27 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2505** | **.2285** | **.2510** | **-.0005** | **.0008** | **.24570** | **.2516** | **.2487** |
| Stddev | .0005 | .0018 | .0031 | .0003 | .0006 | .00112 | .0014 | .0005 |
| %RSD | .1970 | .7800 | 1.246 | 74.66 | 82.00 | .45480 | .5647 | .1892 |
| #1 | .2511 | .2307 | .2463 | -.0009 | .0002 | .24652 | .2503 | .2491 |
| #2 | .2506 | .2291 | .2526 | -.0004 | .0005 | .24418 | .2510 | .2481 |
| #3 | .2506 | .2271 | .2520 | -.0001 | .0007 | .24553 | .2536 | .2487 |
| #4 | .2499 | .2269 | .2531 | -.0004 | .0017 | .24656 | .2516 | .2490 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2483** | **.2638** | **.2504** | **.2489** | **.2478** | **.2474** | **.2481** | **-.0047** |
| Stddev | .0003 | .0113 | .0012 | .0007 | .0006 | .0013 | .0011 | .0043 |
| %RSD | .1024 | 4.278 | .4885 | .2874 | .2429 | .5219 | .4277 | 90.52 |
| #1 | .2483 | .2564 | .2509 | .2491 | .2477 | .2484 | .2484 | -.0081 |
| #2 | .2485 | .2745 | .2517 | .2492 | .2472 | .2455 | .2468 | -.0012 |
| #3 | .2480 | .2724 | .2504 | .2479 | .2475 | .2476 | .2494 | -.0009 |
| #4 | .2485 | .2520 | .2488 | .2494 | .2486 | .2481 | .2480 | -.0087 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/27/2010 10:14:27 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2477** | **.2164** | **.2497** | **.2499** | **.2452** | **.2454** | **.2494** | **.2481** |
| Stddev | .0023 | .0338 | .0013 | .0007 | .0006 | .0011 | .0002 | .0004 |
| %RSD | .9253 | 15.63 | .5304 | .2803 | .2244 | .4498 | .0626 | .1549 |
| #1 | .2483 | .1927 | .2497 | .2507 | .2460 | .2452 | .2492 | .2480 |
| #2 | .2448 | .2159 | .2514 | .2491 | .2447 | .2467 | .2496 | .2477 |
| #3 | .2475 | .1927 | .2494 | .2496 | .2451 | .2457 | .2493 | .2483 |
| #4 | .2503 | .2644 | .2482 | .2502 | .2450 | .2440 | .2494 | .2486 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0592** | **.2484** | **.2502** | **.0117** | **.2472** | **.2492** | **.2476** | **.2491** |
| Stddev | .0777 | .0007 | .0008 | .0174 | .0017 | .0003 | .0009 | .0006 |
| %RSD | 131.2 | .2789 | .3083 | 148.1 | .6872 | .1318 | .3729 | .2214 |
| #1 | .0152 | .2475 | .2500 | -.0097 | .2465 | .2490 | .2478 | .2484 |
| #2 | -.1674 | .2485 | .2493 | .0138 | .2455 | .2496 | .2464 | .2490 |
| #3 | -.0302 | .2485 | .2511 | .0327 | .2475 | .2488 | .2476 | .2495 |
| #4 | -.0544 | .2492 | .2504 | .0101 | .2495 | .2492 | .2486 | .2495 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA1 Acquired: 9/27/2010 10:14:27 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0018** | **-.0043** | **.2486** | **.2471** | **-.0005** | **.00026** |
| Stddev | .0013 | .0119 | .0001 | .0019 | .0031 | .00018 |
| %RSD | 70.16 | 280.0 | .0202 | .7714 | 600.9 | 66.532 |
| #1 | -.0007 | -.0188 | .2486 | .2476 | .0020 | .00012 |
| #2 | -.0028 | .0102 | .2486 | .2444 | -.0018 | .00011 |
| #3 | -.0008 | -.0024 | .2487 | .2473 | .0020 | .00047 |
| #4 | -.0031 | -.0060 | .2486 | .2489 | -.0042 | .00035 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5782.5 | 115260. | 2753.6 | 1472.0 |
| Stddev | 18.9 | 444. | 22.5 | 5.2 |
| %RSD | .32609 | .38494 | .81657 | .35036 |
| #1 | 5759.6 | 115370. | 2754.3 | 1465.3 |
| #2 | 5775.0 | 114620. | 2721.8 | 1477.0 |
| #3 | 5801.0 | 115410. | 2766.8 | 1474.9 |
| #4 | 5794.3 | 115640. | 2771.7 | 1470.8 |

Sample Name: CCVB1 Acquired: 9/27/2010 10:20:25 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.424** | **9.784** | **-.0005** | **1.012** | **10.30** | **.00007** | **.0028** | **.0001** |
| Stddev | .018 | .022 | .0019 | .001 | .05 | .00004 | .0004 | .0000 |
| %RSD | .2466 | .2250 | 378.9 | .1157 | .4432 | 55.286 | 15.43 | 46.88 |
| #1 | 7.399 | 9.757 | -.0013 | 1.012 | 10.34 | .00006 | .0034 | .0000 |
| #2 | 7.437 | 9.779 | .0010 | 1.013 | 10.24 | .00006 | .0027 | .0001 |
| #3 | 7.438 | 9.789 | -.0027 | 1.013 | 10.33 | .00013 | .0029 | .0001 |
| #4 | 7.421 | 9.810 | .0011 | 1.010 | 10.30 | .00004 | .0024 | .0001 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **10.25** | **10.19** | **.0000** | **.0001** | **.0007** | **.0003** | **10.31** |
| Stddev | .0001 | .05 | .15 | .001 | .0002 | .0003 | .0008 | .05 |
| %RSD | 64.45 | .5129 | 1.436 | 3165. | 138.6 | 35.96 | 268.3 | .4711 |
| #1 | -.0002 | 10.28 | 10.03 | .0007 | .0000 | .0007 | .0007 | 10.33 |
| #2 | -.0001 | 10.18 | 10.15 | -.0005 | .0001 | .0008 | .0011 | 10.25 |
| #3 | .0000 | 10.29 | 10.38 | -.0003 | .0000 | .0010 | -.0006 | 10.36 |
| #4 | -.0001 | 10.27 | 10.22 | .0001 | .0004 | .0004 | -.0001 | 10.29 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/27/2010 10:20:25 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **10.14** | **9.997** | **10.10** | **1.032** | **1.015** | **.0000** | **-.0007** |
| Stddev | .0008 | .08 | .133 | .05 | .002 | .007 | .0003 | .0002 |
| %RSD | 437.7 | .7540 | 1.331 | .4479 | .1813 | .7113 | 945.4 | 23.40 |
| #1 | .0005 | 10.21 | 9.948 | 10.09 | 1.030 | 1.023 | .0003 | -.0008 |
| #2 | -.0006 | 10.03 | 9.831 | 10.16 | 1.032 | 1.016 | .0002 | -.0005 |
| #3 | .0005 | 10.18 | 10.09 | 10.09 | 1.034 | 1.015 | -.0001 | -.0006 |
| #4 | -.0011 | 10.13 | 10.11 | 10.05 | 1.033 | 1.005 | -.0003 | -.0008 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.866** | **-.0014** | **-.0002** | **9.980** | **.0001** | **.0013** | **.0004** | **.0003** |
| Stddev | .105 | .0007 | .0003 | .045 | .0003 | .0002 | .0001 | .0000 |
| %RSD | 1.067 | 51.01 | 193.3 | .4528 | 415.3 | 15.36 | 31.73 | 12.01 |
| #1 | 9.800 | -.0015 | -.0006 | 10.01 | .0000 | .0014 | .0005 | .0003 |
| #2 | 10.00 | -.0017 | .0000 | 10.03 | -.0002 | .0016 | .0002 | .0003 |
| #3 | 9.889 | -.0021 | .0000 | 9.944 | .0000 | .0013 | .0004 | .0004 |
| #4 | 9.771 | -.0004 | .0000 | 9.940 | .0005 | .0011 | .0003 | .0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB1 Acquired: 9/27/2010 10:20:25 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.13** | **10.06** | **.0006** | **-.0003** | **.9902** | **1.0184** |
| Stddev | .01 | .09 | .0001 | .0004 | .0028 | .0049 |
| %RSD | .1321 | .9002 | 12.39 | 111.4 | .2870 | .47892 |
| #1 | 10.14 | 10.09 | .0006 | -.0001 | .9924 | 1.0234 |
| #2 | 10.12 | 10.17 | .0005 | -.0004 | .9929 | 1.0117 |
| #3 | 10.15 | 10.02 | .0005 | -.0008 | .9877 | 1.0198 |
| #4 | 10.13 | 9.962 | .0006 | .0000 | .9878 | 1.0185 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5718.7 | 113520. | 2729.5 | 1454.0 |
| Stddev | 13.5 | 380. | 30.7 | 6.1 |
| %RSD | .23541 | .33433 | 1.1262 | .42240 |
| #1 | 5738.5 | 113170. | 2718.6 | 1460.4 |
| #2 | 5711.6 | 113780. | 2774.8 | 1450.5 |
| #3 | 5709.1 | 113210. | 2706.5 | 1457.8 |
| #4 | 5715.7 | 113900. | 2718.0 | 1447.3 |

Sample Name: CCB1 Acquired: 9/27/2010 10:27:50 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **-.0003** | **.0011** | **.0000** | **-.0003** | **-.00002** | **.0010** |
| Stddev | .0001 | .0019 | .0003 | .0008 | .0005 | .00001 | .0008 |
| %RSD | 19.33 | 605.4 | 25.30 | 3267. | 181.0 | 32.166 | 85.47 |
| #1 | .0004 | -.0017 | .0013 | -.0006 | .0001 | -.00002 | .0004 |
| #2 | .0006 | .0011 | .0009 | .0006 | -.0006 | -.00002 | .0016 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cd2144 | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **-.0002** | **.0276** | **.0008** | **-.0002** | **-.0002** | **.0005** |
| Stddev | .000 | .0000 | .0051 | .0001 | .0000 | .0001 | .0000 |
| %RSD | 281.5 | 26.19 | 18.63 | 19.73 | 8.629 | 52.37 | 4.722 |
| #1 | .0000 | -.0002 | .0312 | .0009 | -.0002 | -.0001 | .0006 |
| #2 | .0000 | -.0001 | .0240 | .0006 | -.0002 | -.0002 | .0005 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cu3273 | Fe2599 | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **-.0018** | **-.0009** | **-.0472** | **.0003** | **-.0003** | **.0000** |
| Stddev | .0004 | .0005 | .0005 | .0177 | .0001 | .0014 | .000 |
| %RSD | 244.8 | 28.54 | 58.56 | 37.42 | 29.71 | 475.2 | .2725 |
| #1 | -.0004 | -.0021 | -.0005 | -.0347 | .0002 | .0007 | .0000 |
| #2 | .0001 | -.0014 | -.0013 | -.0597 | .0003 | -.0013 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: CCB1 Acquired: 9/27/2010 10:27:50 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Mn2605 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0021** | **.0001** | **-.0002** | **-.0002** | **.0000** | **-.0007** | **.0154** |
| Stddev | .0033 | .0002 | .0002 | .0770 | .0023 | .0007 | .0014 |
| %RSD | 154.9 | 130.3 | 107.8 | 36560. | 6255. | 92.48 | 8.767 |
| #1 | .0002 | .0000 | .0000 | -.0546 | .0016 | -.0003 | .0164 |
| #2 | -.0044 | .0003 | -.0003 | .0542 | -.0016 | -.0012 | .0145 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **.0000** | **.0000** | **.0000** | **-.0020** | **-.0212** | **.0003** |
| Stddev | .0004 | .0005 | .0001 | .000 | .0031 | .0010 | .0001 |
| %RSD | 456.4 | 3395. | 371.0 | 141.6 | 156.1 | 4.895 | 21.79 |
| #1 | -.0002 | .0004 | -.0001 | .0000 | .0002 | -.0205 | .0003 |
| #2 | .0004 | -.0004 | .0001 | .0000 | -.0042 | -.0220 | .0004 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|
| Units | ppm | ppm | ppm |
| Avg | **-.0007** | **-.0035** | F **.00032** |
| Stddev | .0003 | .0000 | .00020 |
| %RSD | 37.16 | 1.104 | 63.006 |
| #1 | -.0006 | -.0035 | .00018 |
| #2 | -.0009 | -.0036 | .00046 |
| Check ? | Chk Pass | Chk Pass | Chk Fail |
| High Limit | | | .00020 |
| Low Limit | | | -.00020 |

Sample Name: CCB1 Acquired: 9/27/2010 10:27:50 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5804.1 | 116120. | 2755.1 | 1459.3 |
| Stddev | 7.2 | 349. | 15.2 | .4 |
| %RSD | .12350 | .30082 | .55066 | .02874 |
| | | | | |
| #1 | 5799.1 | 116370. | 2744.3 | 1459.0 |
| #2 | 5809.2 | 115870. | 2765.8 | 1459.6 |

Sample Name: CRI Acquired: 9/27/2010 10:31:14 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP8-1-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0542** | **.0466** | **.0497** | **.0989** | **.0039** | **.00478** | **.0521** | **.0054** |
| Stddev | .0002 | .0042 | .0003 | .0006 | .0010 | .00002 | .0002 | .0000 |
| %RSD | .2782 | 9.006 | .6277 | .5970 | 27.08 | .50937 | .3587 | .2428 |
| #1 | .0541 | .0496 | .0499 | .0993 | .0031 | .00476 | .0522 | .0054 |
| #2 | .0544 | .0436 | .0495 | .0984 | .0046 | .00480 | .0520 | .0054 |
| Check ? | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0053** | **.0470** | **.0524** | **.0052** | **.0101** | **.0104** | **.0103** | **.0204** |
| Stddev | .0001 | .0048 | .0002 | .0002 | .0000 | .0000 | .0002 | .0009 |
| %RSD | 2.121 | 10.26 | .4664 | 3.551 | .1102 | .2772 | 2.257 | 4.513 |
| #1 | .0054 | .0504 | .0526 | .0051 | .0101 | .0104 | .0101 | .0210 |
| #2 | .0053 | .0436 | .0522 | .0054 | .0101 | .0105 | .0104 | .0197 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0500** | **-.0163** | **.0201** | **.0215** | **.0049** | **.0047** | **.0099** | **.0200** |
| Stddev | .0006 | .0279 | .0000 | .0027 | .0000 | .0007 | .0001 | .0004 |
| %RSD | 1.282 | 171.4 | .1530 | 12.74 | .7909 | 14.87 | .6539 | 1.839 |
| #1 | .0505 | -.0360 | .0201 | .0235 | .0049 | .0051 | .0099 | .0198 |
| #2 | .0496 | .0035 | .0201 | .0196 | .0048 | .0042 | .0100 | .0203 |
| Check ? | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CRI Acquired: 9/27/2010 10:31:14 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP8-1-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.3730** | **.0974** | **.0114** | **.2377** | **.0491** | **.0101** | **.0103** | **.0104** |
| Stddev | .0326 | .0013 | .0005 | .0304 | .0003 | .0005 | .0001 | .0001 |
| %RSD | 8.739 | 1.359 | 4.431 | 12.78 | .6853 | 4.920 | .6160 | .7089 |
| #1 | .3961 | .0984 | .0110 | .2591 | .0493 | .0105 | .0102 | .0104 |
| #2 | .3500 | .0965 | .0117 | .2162 | .0488 | .0098 | .0103 | .0105 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.1936** | **.3977** | **.0104** | **.2013** | **.0076** | **.00999** |
| Stddev | .0046 | .0101 | .0001 | .0028 | .0053 | .00013 |
| %RSD | 2.373 | 2.535 | .8574 | 1.386 | 70.64 | 1.2819 |
| #1 | .1968 | .3905 | .0103 | .1993 | .0113 | .00990 |
| #2 | .1904 | .4048 | .0104 | .2033 | .0038 | .01008 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5750.5 | 115330. | 2772.3 | 1472.8 |
| Stddev | 14.3 | 505. | 20.6 | 5.5 |
| %RSD | .24843 | .43761 | .74453 | .37476 |
| #1 | 5760.6 | 114970. | 2757.7 | 1476.7 |
| #2 | 5740.4 | 115690. | 2786.9 | 1468.9 |

Sample Name: LL CRI Acquired: 9/27/2010 10:34:17 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) 1/100 ICP7-89-A

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0026** | **.0026** | **.0102** | **.0091** | **.0016** | **.00016** | **.0109** | **.0005** |
| Stddev | .0000 | .0002 | .0021 | .0012 | .0007 | .00003 | .0003 | .0001 |
| %RSD | 1.891 | 8.407 | 20.20 | 13.72 | 46.08 | 16.155 | 2.695 | 11.15 |
| #1 | .0026 | .0025 | .0117 | .0082 | .0022 | .00018 | .0107 | .0006 |
| #2 | .0026 | .0028 | .0088 | .0099 | .0011 | .00014 | .0111 | .0005 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **.0179** | **.0059** | **.0020** | **.0006** | **.0023** | **.0016** | **.0078** |
| Stddev | .0000 | .0036 | .0002 | .0003 | .0000 | .0000 | .0006 | .0045 |
| %RSD | 8.729 | 19.86 | 4.177 | 17.16 | .3739 | 1.921 | 39.79 | 58.16 |
| #1 | .0005 | .0154 | .0058 | .0017 | .0006 | .0024 | .0012 | .0110 |
| #2 | .0004 | .0204 | .0061 | .0022 | .0006 | .0023 | .0021 | .0046 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0099** | **.0021** | **.0024** | **.0043** | **.0005** | **-.0003** | **.0017** | **.0018** |
| Stddev | .0002 | .0065 | .0001 | .0032 | .0001 | .0001 | .0005 | .0001 |
| %RSD | 2.346 | 301.6 | 2.499 | 74.76 | 14.98 | 18.62 | 26.59 | 3.656 |
| #1 | .0098 | -.0024 | .0024 | .0066 | .0005 | -.0003 | .0014 | .0017 |
| #2 | .0101 | .0067 | .0025 | .0020 | .0004 | -.0004 | .0020 | .0018 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: LL CRI Acquired: 9/27/2010 10:34:17 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) 1/100 ICP7-89-A

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **.0202** | **.0188** | **.0024** | **.1976** | **.0096** | **.0022** | **.0021** | **.0021** |
| Stddev | .0109 | .0017 | .0000 | .0242 | .0007 | .0000 | .0001 | .0001 |
| %RSD | 53.77 | 9.019 | .3889 | 12.23 | 7.156 | .5952 | 3.667 | 3.799 |
| #1 | .0279 | .0176 | .0024 | .1805 | .0101 | .0022 | .0021 | .0022 |
| #2 | .0125 | .0200 | .0024 | .2147 | .0091 | .0022 | .0022 | .0021 |
| Check ? | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | .1000 | | | | | | | |
| Range | -50.00% | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0178** | **.0462** | **.0013** | **.0087** | **.0098** | **.00014** |
| Stddev | .0030 | .0066 | .0001 | .0000 | .0050 | .00011 |
| %RSD | 16.96 | 14.28 | 4.680 | .1362 | 50.66 | 77.921 |
| #1 | .0199 | .0415 | .0013 | .0087 | .0063 | .00006 |
| #2 | .0157 | .0508 | .0012 | .0087 | .0133 | .00022 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5743.8 | 115120. | 2713.9 | 1459.0 |
| Stddev | 6.9 | 891. | 4.5 | 3.2 |
| %RSD | .11947 | .77382 | .16662 | .21809 |
| #1 | 5748.7 | 114490. | 2710.7 | 1461.2 |
| #2 | 5739.0 | 115750. | 2717.1 | 1456.7 |

Sample Name: ICSA Acquired: 9/27/2010 10:36:45 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP7-83-C

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **17.62** | **469.4** | **.0061** | **.0058** | **.0002** | **-.00037** | **-.0006** | **.0005** |
| Stddev | .03 | 3.0 | .0010 | .0011 | .0002 | .00005 | .0008 | .0002 |
| %RSD | .1749 | .6477 | 15.90 | 19.02 | 94.75 | 13.041 | 131.9 | 27.81 |
| #1 | 17.60 | 471.6 | .0068 | .0050 | .0004 | -.00033 | -.0012 | .0007 |
| #2 | 17.65 | 467.3 | .0054 | .0066 | .0001 | -.00040 | .0000 | .0004 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0006** | **485.9** | ***** | **.0031** | **-.0019** | **-.0018** | **.0016** | **190.2** |
| Stddev | .0000 | 2.0 | ----- | .0001 | .0003 | .0006 | .0004 | 1.5 |
| %RSD | 4.589 | .4161 | ----- | 2.461 | 15.54 | 34.98 | 26.91 | .7729 |
| #1 | -.0006 | 484.5 | ----- | .0032 | -.0017 | -.0013 | .0019 | 189.1 |
| #2 | -.0006 | 487.4 | ----- | .0030 | -.0021 | -.0022 | .0013 | 191.2 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **501.9** | ***** | **401.5** | **.0178** | **.0115** | **.0001** | **.0026** |
| Stddev | .0008 | .6 | ----- | 2.3 | .0002 | .0016 | .0000 | .0001 |
| %RSD | 232.3 | .1211 | ----- | .5752 | 1.382 | 13.89 | 5.538 | 5.104 |
| #1 | -.0009 | 502.3 | ----- | 403.1 | .0180 | .0126 | .0001 | .0027 |
| #2 | .0002 | 501.5 | ----- | 399.9 | .0177 | .0103 | .0001 | .0025 |
| Check ? | None | Chk Pass | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSA Acquired: 9/27/2010 10:36:45 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP7-83-C

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0445** | **-.0155** | **-.0003** | **.0209** | **.0011** | **.0007** | **.0023** | **.0008** |
| Stddev | .0052 | .0013 | .0001 | .0120 | .0005 | .0002 | .0000 | .0002 |
| %RSD | 11.68 | 8.693 | 46.62 | 57.30 | 41.36 | 25.86 | 1.418 | 23.82 |
| #1 | -.0408 | -.0165 | -.0003 | .0294 | .0008 | .0006 | .0024 | .0009 |
| #2 | -.0482 | -.0146 | -.0002 | .0124 | .0014 | .0009 | .0023 | .0007 |
| Check ? | None | None | None | None | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0255** | **.0260** | **.0046** | **-.0013** | **.0083** | **.01119** |
| Stddev | .0045 | .0022 | .0002 | .0005 | .0057 | .00007 |
| %RSD | 17.70 | 8.615 | 4.878 | 39.99 | 68.56 | .61843 |
| #1 | .0287 | .0275 | .0044 | -.0009 | .0043 | .01124 |
| #2 | .0223 | .0244 | .0048 | -.0017 | .0124 | .01114 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5267.5 | 104250. | 2608.3 | 1306.3 |
| Stddev | 9.1 | 60. | 2.5 | 2.8 |
| %RSD | .17365 | .05760 | .09759 | .21796 |
| #1 | 5273.9 | 104300. | 2610.1 | 1308.3 |
| #2 | 5261.0 | 104210. | 2606.5 | 1304.3 |

Sample Name: ICSAB Acquired: 9/27/2010 10:40:44 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP7-92-B

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **17.70** | **465.3** | **.9455** | **.0011** | **.5274** | **.48270** | **.0004** | **.9730** |
| Stddev | .00 | 4.8 | .0012 | .0027 | .0032 | .00010 | .0010 | .0019 |
| %RSD | .0243 | 1.037 | .1321 | 251.6 | .6035 | .02010 | 273.7 | .1942 |
| #1 | 17.71 | 468.8 | .9464 | -.0008 | .5297 | .48277 | .0011 | .9743 |
| #2 | 17.70 | 461.9 | .9446 | .0029 | .5252 | .48264 | -.0003 | .9716 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.9454** | **486.6** | ***** | **.5025** | **.4853** | **.4829** | **.5037** | **191.1** |
| Stddev | .0008 | 2.9 | ----- | .0020 | .0010 | .0000 | .0009 | 1.1 |
| %RSD | .0869 | .5995 | ----- | .3957 | .1982 | .0022 | .1799 | .5956 |
| #1 | .9448 | 488.6 | ----- | .5011 | .4846 | .4828 | .5044 | 191.9 |
| #2 | .9460 | 484.5 | ----- | .5039 | .4860 | .4829 | .5031 | 190.3 |
| Check ? | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.005** | **503.3** | ***** | **395.5** | **.5144** | **.5260** | **.0000** | **.9440** |
| Stddev | .002 | 2.3 | ----- | 3.4 | .0022 | .0018 | .000 | .0004 |
| %RSD | .1836 | .4490 | ----- | .8593 | .4265 | .3413 | 1614. | .0387 |
| #1 | 1.007 | 504.9 | ----- | 393.1 | .5129 | .5248 | .0002 | .9437 |
| #2 | 1.004 | 501.7 | ----- | 397.9 | .5160 | .5273 | -.0002 | .9443 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: ICSAB Acquired: 9/27/2010 10:40:44 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) ICP7-92-B

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0970** | **-.0150** | **.9892** | **.0304** | **.0013** | **.5245** | **.9525** | **.9162** |
| Stddev | .0281 | .0015 | .0044 | .0032 | .0005 | .0012 | .0023 | .0005 |
| %RSD | 28.98 | 10.09 | .4421 | 10.46 | 33.85 | .2297 | .2462 | .0566 |
| #1 | -.0771 | -.0139 | .9923 | .0282 | .0010 | .5236 | .9541 | .9158 |
| #2 | -.1169 | -.0160 | .9861 | .0327 | .0017 | .5253 | .9508 | .9165 |
| Check ? | None | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0205** | **.0161** | **.0048** | **-.0012** | **.0062** | **.01154** |
| Stddev | .0061 | .0033 | .0003 | .0009 | .0003 | .00075 |
| %RSD | 29.61 | 20.55 | 6.685 | 76.82 | 5.301 | 6.4912 |
| #1 | .0247 | .0184 | .0046 | -.0018 | .0064 | .01207 |
| #2 | .0162 | .0137 | .0051 | -.0005 | .0059 | .01101 |
| Check ? | None | None | None | None | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5238.5 | 103290. | 2590.7 | 1287.7 |
| Stddev | 1.4 | 269. | 10.3 | 3.5 |
| %RSD | .02739 | .26062 | .39687 | .27043 |
| #1 | 5239.5 | 103480. | 2583.4 | 1285.3 |
| #2 | 5237.5 | 103100. | 2598.0 | 1290.2 |

Sample Name: RB Acquired: 9/27/2010 10:44:42 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0007** | F **.0014** | **.0026** | **-.0002** | F **.0002** | **.00001** | F **-.0008** | **.0000** |
| #1 | .0008 | .0033 | .0026 | -.0008 | .0001 | .00002 | -.0007 | .0000 |
| #2 | .0006 | -.0005 | .0026 | .0004 | .0004 | .00001 | -.0008 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | F **.0157** | **.0026** | F **-.0001** | **-.0003** | **.0005** | **-.0003** | F **-.0018** |
| #1 | -.0001 | .0224 | .0026 | -.0001 | -.0006 | .0007 | -.0004 | -.0065 |
| #2 | -.0001 | .0091 | .0025 | -.0001 | .0000 | .0003 | -.0003 | .0028 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0011** | **.0023** | F **.0018** | **-.0008** | **-.0002** | **-.0001** | F **-.0962** | **.0012** |
| #1 | -.0016 | .0024 | .0055 | -.0008 | -.0002 | -.0003 | -.0435 | .0020 |
| #2 | -.0005 | .0022 | -.0018 | -.0008 | -.0001 | .0001 | -.1489 | .0004 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **-.0243** | **.0003** | **.0002** | F **.0000** | F **.0001** | **-.0009** | **-.0065** |
| #1 | .0003 | .0058 | .0002 | .0009 | .0001 | .0001 | -.0021 | .0043 |
| #2 | -.0003 | -.0544 | .0004 | -.0005 | .0000 | .0000 | .0004 | -.0172 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0007** | **-.0075** | **.00008** |
| #1 | .0000 | -.0008 | -.0076 | .00019 |
| #2 | .0002 | -.0005 | -.0074 | -.00003 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5774.6 | 114930. | 2728.9 | 1445.5 |
| #1 | 5790.6 | 115000. | 2724.2 | 1448.7 |
| #2 | 5758.6 | 114860. | 2733.6 | 1442.3 |

Sample Name: K1008857-MB Acquired: 9/27/2010 10:47:10 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0008** | **.0000** | **.0004** | **-.0016** | **-.0005** | **.00002** | **-.0009** | **.0000** |
| #1 | .0008 | .0028 | .0003 | -.0025 | -.0005 | .00002 | -.0014 | .0000 |
| #2 | .0007 | -.0029 | .0005 | -.0008 | -.0005 | .00002 | -.0004 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0266** | **.0034** | **.0000** | **-.0007** | **.0002** | **.0002** | **.0159** |
| #1 | -.0001 | .0285 | .0034 | .0001 | -.0010 | .0003 | .0011 | .0130 |
| #2 | .0000 | .0247 | .0034 | .0000 | -.0004 | .0000 | -.0007 | .0188 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0023** | **-.0022** | **-.0006** | **-.0004** | **-.0001** | **-.0614** | **.0016** |
| #1 | .0005 | .0023 | -.0037 | -.0006 | -.0003 | -.0002 | -.0083 | .0014 |
| #2 | -.0001 | .0023 | -.0008 | -.0006 | -.0005 | .0000 | -.1144 | .0018 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0229** | **-.0002** | **.0003** | **.0015** | **.0014** | **.1627** | **-.0074** |
| #1 | -.0007 | .0422 | -.0005 | .0001 | .0014 | .0014 | .1635 | -.0223 |
| #2 | .0004 | .0036 | .0001 | .0004 | .0015 | .0014 | .1618 | .0075 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0019** | **-.0036** | **.00007** |
| #1 | .0002 | -.0010 | -.0022 | .00005 |
| #2 | .0000 | -.0027 | -.0049 | .00010 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5715.1 | 115070. | 2708.7 | 1446.0 |
| #1 | 5720.9 | 115260. | 2695.2 | 1450.2 |
| #2 | 5709.2 | 114880. | 2722.3 | 1441.8 |

Sample Name: LCSW Acquired: 9/27/2010 10:50:15 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) K1008857

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.899** | **2.463** | **2.532** | **5.073** | **.12430** | **.9241** | **1.255** | **1.260** |
| #1 | 4.904 | 2.465 | 2.532 | 5.078 | .12411 | .9196 | 1.253 | 1.258 |
| #2 | 4.894 | 2.462 | 2.532 | 5.069 | .12448 | .9287 | 1.257 | 1.263 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.55** | **12.53** | **.5054** | **1.265** | **.6223** | **.6549** | **2.518** | **2.538** |
| #1 | 12.60 | 12.42 | .5059 | 1.263 | .6227 | .6527 | 2.531 | 2.535 |
| #2 | 12.51 | 12.63 | .5050 | 1.267 | .6218 | .6572 | 2.506 | 2.541 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **12.31** | **1.259** | **.9424** | **1.261** | F **12.18** | **2.425** | **.6389** | F **12.30** |
| #1 | 12.32 | 1.259 | .9405 | 1.259 | 12.20 | 2.425 | .6386 | 12.26 |
| #2 | 12.30 | 1.259 | .9444 | 1.263 | 12.15 | 2.425 | .6392 | 12.33 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **1.286** | **1.235** | **1.246** | **.1320** | **-.0256** | **.1014** | **2.573** |
| #1 | .0007 | 1.291 | 1.235 | 1.246 | .1345 | -.0304 | .1015 | 2.567 |
| #2 | .0004 | 1.282 | 1.236 | 1.247 | .1295 | -.0208 | .1012 | 2.579 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | ppm | ppm |
| Avg | **-.0008** | **.00018** |
| #1 | .0002 | .00034 |
| #2 | -.0017 | .00001 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5720.4** | **115260.** | **2738.5** | **1461.6** |
| #1 | 5731.2 | 115000. | 2738.7 | 1463.3 |
| #2 | 5709.5 | 115520. | 2738.2 | 1460.0 |

Sample Name: K1008857-003 Acquired: 9/27/2010 10:53:25 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0013** | F **.0016** | **.0004** | **.0017** | F **-.0003** | **-.00005** | F **.0027** | **.0000** |
| #1 | .0013 | .0030 | .0002 | .0022 | -.0006 | -.00005 | .0034 | .0000 |
| #2 | .0013 | .0001 | .0005 | .0012 | .0000 | -.00005 | .0020 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0289** | **.0083** | F **.0001** | **-.0004** | **.0000** | **.0003** | F **.0036** |
| #1 | -.0001 | .0338 | .0085 | .0001 | -.0005 | .0003 | .0005 | .0014 |
| #2 | .0000 | .0240 | .0082 | .0002 | -.0003 | -.0004 | .0001 | .0059 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **.0020** | F **-.0001** | **-.0006** | **.0004** | **-.0003** | F **-.1700** | **.0000** |
| #1 | -.0006 | .0020 | -.0012 | -.0006 | .0005 | -.0004 | -.1618 | .0002 |
| #2 | .0001 | .0020 | .0011 | -.0007 | .0003 | -.0002 | -.1782 | -.0001 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | F **.0003** | **-.0002** | **-.0001** | F **.0009** | F **.0009** | **.1791** | **-.0090** |
| #1 | -.0006 | -.0164 | -.0007 | -.0004 | .0011 | .0010 | .1804 | -.0073 |
| #2 | -.0002 | .0170 | .0002 | .0002 | .0008 | .0008 | .1777 | -.0106 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0003** | **-.0032** | **.00005** |
| #1 | .0003 | -.0001 | -.0047 | -.00009 |
| #2 | .0001 | .0007 | -.0017 | .00020 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5764.4** | **115620.** | **2760.5** | **1457.5** |
| #1 | 5774.5 | 115640. | 2758.7 | 1456.2 |
| #2 | 5754.3 | 115600. | 2762.3 | 1458.7 |

Sample Name: K1008857-003D Acquired: 9/27/2010 10:56:32 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0014** | F **.0006** | **.0011** | **-.0017** | F **-.0005** | **-.00004** | F **.0005** | **.0000** |
| #1 | .0013 | .0003 | .0007 | -.0020 | -.0001 | -.00004 | -.0002 | .0000 |
| #2 | .0015 | .0010 | .0014 | -.0014 | -.0009 | -.00005 | .0011 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **.0216** | **.0080** | F **.0002** | **-.0005** | **.0002** | **.0000** | F **.0025** |
| #1 | -.0002 | .0118 | .0078 | .0002 | -.0007 | .0002 | -.0007 | .0011 |
| #2 | -.0002 | .0315 | .0081 | .0001 | -.0003 | .0002 | .0006 | .0038 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0011** | **.0018** | F **.0026** | **-.0006** | **.0000** | **-.0002** | F **.0039** | **.0001** |
| #1 | -.0003 | .0018 | .0012 | -.0007 | .0000 | -.0001 | .0081 | -.0001 |
| #2 | -.0019 | .0017 | .0040 | -.0006 | .0000 | -.0003 | -.0003 | .0003 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | F **-.0071** | **.0001** | **-.0001** | F **.0011** | F **.0010** | **.1478** | **-.0176** |
| #1 | -.0007 | .0055 | -.0001 | .0000 | .0012 | .0010 | .1453 | -.0174 |
| #2 | .0002 | -.0198 | .0003 | -.0002 | .0010 | .0011 | .1502 | -.0178 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0018** | **.0007** | **-.00013** |
| #1 | .0003 | -.0016 | .0029 | -.00017 |
| #2 | .0000 | -.0019 | -.0014 | -.00008 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5681.3 | 114260. | 2725.5 | 1437.3 |
| #1 | 5684.0 | 114690. | 2722.9 | 1440.3 |
| #2 | 5678.7 | 113830. | 2728.2 | 1434.2 |

Sample Name: K1008857-003L Acquired: 9/27/2010 10:59:39 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) 1/5

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | F **-.0018** | **-.0008** | **.0018** | F **-.0008** | **.00003** | F **.0006** | **.0000** |
| #1 | .0004 | -.0035 | .0012 | .0012 | -.0009 | .00004 | .0003 | .0000 |
| #2 | .0005 | -.0001 | -.0028 | .0024 | -.0006 | .00002 | .0009 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0202** | **.0026** | F **.0000** | **-.0002** | **.0002** | **-.0005** | F **-.0049** |
| #1 | -.0001 | .0168 | .0025 | .0000 | -.0004 | .0000 | -.0008 | -.0021 |
| #2 | .0000 | .0235 | .0027 | .0000 | -.0001 | .0005 | -.0002 | -.0076 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **.0013** | F **.0002** | **-.0006** | **-.0001** | **-.0001** | F **.0354** | **-.0007** |
| #1 | .0009 | .0012 | .0009 | -.0006 | -.0002 | .0000 | .1163 | -.0024 |
| #2 | -.0003 | .0013 | -.0004 | -.0006 | -.0001 | -.0002 | -.0456 | .0009 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | F **.0095** | **-.0004** | **.0000** | F **.0002** | F **.0003** | **.0341** | **-.0014** |
| #1 | .0000 | -.0085 | -.0002 | .0001 | .0003 | .0003 | .0344 | .0107 |
| #2 | -.0004 | .0275 | -.0007 | -.0001 | .0002 | .0003 | .0339 | -.0136 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0001** | **-.0004** | **-.0007** | **-.00001** |
| #1 | .0000 | .0004 | -.0020 | .00013 |
| #2 | .0001 | -.0012 | .0005 | -.00016 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5712.2 | 114280. | 2721.5 | 1437.6 |
| #1 | 5712.7 | 114290. | 2728.0 | 1436.0 |
| #2 | 5711.8 | 114270. | 2715.0 | 1439.1 |

Sample Name: CCVA2 Acquired: 9/27/2010 11:02:45 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2478** | **.2276** | **.2483** | **-.0018** | **-.0001** | **.24754** | **.2470** | **.2485** |
| Stddev | .0000 | .0004 | .0021 | .0000 | .0010 | .00033 | .0004 | .0008 |
| %RSD | .0053 | .1797 | .8281 | 1.197 | 1328. | .13371 | .1717 | .3261 |
| #1 | .2478 | .2273 | .2497 | -.0018 | -.0008 | .24730 | .2467 | .2479 |
| #2 | .2478 | .2279 | .2468 | -.0019 | .0006 | .24777 | .2473 | .2491 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2474** | **.2505** | **.2447** | **.2468** | **.2480** | **.2492** | **.2490** | **-.0047** |
| Stddev | .0002 | .0181 | .0016 | .0006 | .0002 | .0006 | .0004 | .0025 |
| %RSD | .0743 | 7.218 | .6442 | .2462 | .0691 | .2430 | .1427 | 52.88 |
| #1 | .2473 | .2377 | .2436 | .2464 | .2481 | .2487 | .2488 | -.0065 |
| #2 | .2475 | .2633 | .2458 | .2473 | .2478 | .2496 | .2493 | -.0030 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2504** | **.1926** | **.2465** | **.2531** | **.2450** | **.2479** | **.2469** | **.2468** |
| Stddev | .0009 | .0480 | .0012 | .0029 | .0002 | .0023 | .0008 | .0004 |
| %RSD | .3425 | 24.94 | .4846 | 1.146 | .0794 | .9214 | .3285 | .1429 |
| #1 | .2510 | .1587 | .2456 | .2552 | .2451 | .2463 | .2463 | .2465 |
| #2 | .2498 | .2266 | .2473 | .2511 | .2448 | .2496 | .2475 | .2470 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA2 Acquired: 9/27/2010 11:02:45 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.1251** | **.2461** | **.2491** | **.0160** | **.2499** | **.2470** | **.2505** | **.2472** |
| Stddev | .1032 | .0013 | .0007 | .0114 | .0005 | .0008 | .0012 | .0001 |
| %RSD | 82.53 | .5104 | .2686 | 70.90 | .1840 | .3078 | .4926 | .0318 |
| #1 | -.0521 | .2470 | .2486 | .0080 | .2496 | .2475 | .2497 | .2473 |
| #2 | -.1981 | .2452 | .2495 | .0241 | .2502 | .2464 | .2514 | .2472 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0048** | **-.0043** | **.2475** | **.2500** | **-.0024** | **.00044** |
| Stddev | .0022 | .0056 | .0000 | .0011 | .0005 | .00035 |
| %RSD | 46.15 | 129.9 | .0161 | .4506 | 21.88 | 79.711 |
| #1 | -.0063 | -.0083 | .2475 | .2508 | -.0021 | .00068 |
| #2 | -.0032 | -.0004 | .2476 | .2492 | -.0028 | .00019 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5792.9 | 116140. | 2822.2 | 1462.7 |
| Stddev | 5.4 | 175. | 10.8 | 4.0 |
| %RSD | .09385 | .15068 | .38275 | .27045 |
| #1 | 5796.8 | 116010. | 2829.9 | 1465.5 |
| #2 | 5789.1 | 116260. | 2814.6 | 1459.9 |

Sample Name: CCVB2 Acquired: 9/27/2010 11:05:44 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.235** | **9.681** | **.0007** | **1.006** | **10.08** | **.00011** | **.0018** | **.0001** |
| Stddev | .017 | .037 | .0000 | .005 | .06 | .00001 | .0020 | .0000 |
| %RSD | .2393 | .3857 | 6.257 | .5156 | .6344 | 9.1598 | 109.5 | 22.36 |
| #1 | 7.223 | 9.654 | .0007 | 1.002 | 10.03 | .00010 | .0032 | .0002 |
| #2 | 7.248 | 9.707 | .0006 | 1.010 | 10.12 | .00012 | .0004 | .0001 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **10.04** | **9.970** | **.0001** | **-.0001** | **.0011** | **-.0002** | **10.06** |
| Stddev | .0000 | .09 | .372 | .0001 | .0002 | .0001 | .0010 | .05 |
| %RSD | 38.81 | .9399 | 3.732 | 89.75 | 206.3 | 9.395 | 483.5 | .5166 |
| #1 | -.0001 | 9.972 | 9.706 | .0000 | -.0002 | .0012 | -.0009 | 10.02 |
| #2 | -.0001 | 10.11 | 10.23 | .0001 | .0000 | .0010 | .0005 | 10.10 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | **9.962** | **9.730** | **10.06** | **1.015** | **1.000** | **.0003** | **-.0008** |
| Stddev | .0011 | .103 | .157 | .10 | .001 | .013 | .0002 | .0001 |
| %RSD | 265.8 | 1.035 | 1.609 | 1.018 | .1201 | 1.327 | 64.28 | 18.03 |
| #1 | .0004 | 9.889 | 9.619 | 10.13 | 1.016 | 1.010 | .0005 | -.0009 |
| #2 | -.0012 | 10.03 | 9.841 | 9.984 | 1.014 | .9909 | .0002 | -.0007 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB2 Acquired: 9/27/2010 11:05:44 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.828** | **-.0019** | **-.0002** | **9.973** | **-.0006** | **.0016** | **.0003** | **.0003** |
| Stddev | .081 | .0021 | .0003 | .171 | .0002 | .0006 | .0001 | .0000 |
| %RSD | .8279 | 110.1 | 152.4 | 1.710 | 31.41 | 37.85 | 38.55 | 14.58 |
| #1 | 9.886 | -.0004 | -.0005 | 10.09 | -.0005 | .0021 | .0002 | .0003 |
| #2 | 9.771 | -.0033 | .0000 | 9.852 | -.0008 | .0012 | .0004 | .0003 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.08** | **10.05** | **.0007** | **-.0001** | **.9857** | **.99768** |
| Stddev | .02 | .09 | .0000 | .0012 | .0066 | .00854 |
| %RSD | .1675 | .9150 | 4.131 | 1549. | .6662 | .85625 |
| #1 | 10.07 | 10.11 | .0007 | -.0009 | .9904 | .99164 |
| #2 | 10.09 | 9.982 | .0007 | .0008 | .9811 | 1.0037 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5808.9** | **115010.** | **2773.3** | **1471.8** |
| Stddev | .2 | 36. | 52.8 | .2 |
| %RSD | .00419 | .03167 | 1.9026 | .01384 |
| #1 | 5808.7 | 115040. | 2810.6 | 1471.6 |
| #2 | 5809.1 | 114990. | 2735.9 | 1471.9 |

Sample Name: CCB2 Acquired: 9/27/2010 11:09:51 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0009** | **-.0004** | **-.0014** | **.0012** | **.0016** | **.00000** | **.0006** | **.0001** |
| Stddev | .0001 | .0013 | .0009 | .0005 | .0005 | .0000 | .0004 | .0000 |
| %RSD | 13.88 | 322.7 | 68.92 | 43.77 | 28.76 | 3165.4 | 67.48 | 29.12 |
| #1 | .0010 | .0005 | -.0020 | .0008 | .0013 | -.00002 | .0010 | .0000 |
| #2 | .0008 | -.0013 | -.0007 | .0015 | .0019 | .00002 | .0003 | .0001 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0128** | **.0013** | **.0000** | **-.0004** | **.0005** | **.0003** | **-.0013** |
| Stddev | .0000 | .0092 | .0000 | .001 | .0005 | .0002 | .0008 | .0049 |
| %RSD | 26.93 | 71.77 | 2.059 | 1516. | 119.5 | 40.87 | 229.7 | 389.1 |
| #1 | -.0001 | .0063 | .0013 | -.0004 | -.0001 | .0004 | .0009 | -.0047 |
| #2 | -.0001 | .0192 | .0013 | .0003 | -.0007 | .0006 | -.0002 | .0022 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0002** | **-.0264** | **.0012** | **.0000** | **-.0005** | **.0002** | **-.0001** | **-.0002** |
| Stddev | .0001 | .0011 | .0001 | .002 | .0000 | .0017 | .0003 | .0001 |
| %RSD | 85.88 | 4.324 | 9.719 | 16210. | 9.074 | 789.9 | 433.5 | 64.13 |
| #1 | -.0001 | -.0272 | .0013 | -.0015 | -.0005 | .0014 | .0001 | -.0001 |
| #2 | -.0003 | -.0256 | .0012 | .0015 | -.0005 | -.0010 | -.0002 | -.0003 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB2 Acquired: 9/27/2010 11:09:51 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0614** | **-.0003** | **.0003** | **-.0049** | **.0003** | **-.0003** | **.0000** | **.0000** |
| Stddev | .0262 | .0000 | .0002 | .0011 | .0002 | .0000 | .000 | .0000 |
| %RSD | 42.69 | 12.12 | 81.70 | 21.38 | 65.20 | 11.06 | 875.3 | 241.9 |
| #1 | -.0428 | -.0003 | .0005 | -.0042 | .0002 | -.0003 | .0000 | .0001 |
| #2 | -.0799 | -.0003 | .0001 | -.0057 | .0005 | -.0003 | -.0001 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0013** | **-.0162** | **.0003** | **-.0001** | **-.0018** | **.00003** |
| Stddev | .0014 | .0001 | .0001 | .0006 | .0014 | .00013 |
| %RSD | 108.4 | .5737 | 35.34 | 692.2 | 82.21 | 514.18 |
| #1 | -.0023 | -.0162 | .0004 | -.0005 | -.0028 | -.00007 |
| #2 | -.0003 | -.0163 | .0003 | .0003 | -.0007 | .00012 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5812.1 | 115940. | 2733.1 | 1454.4 |
| Stddev | 6.6 | 124. | 44.6 | 2.6 |
| %RSD | .11386 | .10719 | 1.6314 | .17959 |
| #1 | 5816.8 | 116030. | 2764.6 | 1456.2 |
| #2 | 5807.4 | 115850. | 2701.5 | 1452.5 |

Sample Name: K1008857-003S Acquired: 9/27/2010 11:12:20 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.908** | **.4908** | **.9531** | **1.993** | **.04839** | F **-.0003** | **.0497** | **.0496** |
| #1 | 1.907 | .4945 | .9547 | 1.990 | .04815 | -.0013 | .0497 | .0496 |
| #2 | 1.910 | .4872 | .9516 | 1.997 | .04864 | .0008 | .0498 | .0496 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **10.42** | **10.29** | **.1997** | **.4976** | **.2452** | **.2523** | **.9953** | **.4971** |
| #1 | 10.43 | 10.25 | .1996 | .4964 | .2444 | .2510 | .9902 | .4956 |
| #2 | 10.40 | 10.33 | .1997 | .4987 | .2459 | .2537 | 1.000 | .4985 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **10.17** | **.4915** | **-.0003** | **.4970** | F **9.937** | **.9176** | **.0498** | F **10.15** |
| #1 | 10.18 | .4907 | -.0002 | .4965 | 9.943 | .9182 | .0499 | 10.15 |
| #2 | 10.17 | .4923 | -.0005 | .4975 | 9.930 | .9170 | .0496 | 10.14 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0010** | **.5104** | **.4960** | **.4982** | **.1754** | **-.0121** | **.1035** | **.9589** |
| #1 | -.0009 | .5106 | .4951 | .4985 | .1751 | -.0262 | .1035 | .9576 |
| #2 | -.0010 | .5103 | .4969 | .4980 | .1756 | .0019 | .1035 | .9603 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | ppm | ppm |
| Avg | **-.0031** | **.00033** |
| #1 | -.0049 | .00047 |
| #2 | -.0013 | .00019 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5714.1 | 114330. | 2735.5 | 1461.3 |
| #1 | 5724.9 | 114150. | 2739.8 | 1463.0 |
| #2 | 5703.4 | 114520. | 2731.3 | 1459.7 |

Sample Name: RB Acquired: 9/27/2010 11:15:33 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **.0020** | **.0003** | **-.0010** | **-.0004** | **.00001** | **-.0004** | **.0000** |
| #1 | .0002 | .0003 | -.0002 | -.0009 | .0001 | .00000 | -.0002 | .0000 |
| #2 | .0002 | .0037 | .0008 | -.0010 | -.0010 | .00003 | -.0006 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0140** | **.0016** | **-.0003** | **-.0006** | **.0008** | **-.0014** | **-.0040** |
| #1 | -.0001 | .0120 | .0016 | -.0004 | -.0005 | .0007 | -.0015 | -.0071 |
| #2 | .0000 | .0160 | .0017 | -.0001 | -.0007 | .0008 | -.0012 | -.0008 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **.0009** | **-.0018** | **-.0006** | **-.0004** | **-.0002** | **-.1795** | **.0003** |
| #1 | -.0001 | .0009 | .0003 | -.0006 | -.0004 | -.0003 | -.1833 | -.0004 |
| #2 | -.0004 | .0008 | -.0040 | -.0006 | -.0003 | -.0001 | -.1757 | .0010 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0098** | **-.0005** | **.0002** | **.0001** | **.0000** | **.0006** | **-.0210** |
| #1 | .0001 | .0305 | -.0003 | .0002 | .0002 | .0000 | -.0006 | -.0338 |
| #2 | -.0003 | -.0109 | -.0007 | .0003 | .0001 | .0000 | .0018 | -.0082 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **.0000** | **-.0018** | **-.00007** |
| #1 | .0004 | -.0004 | -.0009 | .00011 |
| #2 | .0003 | .0005 | -.0027 | -.00025 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5765.0 | 115720. | 2708.4 | 1447.5 |
| #1 | 5768.7 | 115670. | 2704.5 | 1449.2 |
| #2 | 5761.3 | 115770. | 2712.3 | 1445.8 |

Sample Name: K1008697-MB Acquired: 9/27/2010 11:18:03 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **-.0010** | **.0008** | **.0002** | **.0003** | **.00004** | **-.0004** | **.0001** |
| #1 | .0005 | -.0017 | .0001 | .0011 | .0004 | .00002 | -.0010 | .0001 |
| #2 | .0005 | -.0004 | .0015 | -.0007 | .0001 | .00006 | .0002 | .0001 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0093** | **.0027** | **-.0001** | **-.0004** | **.0006** | **-.0006** | **-.0031** |
| #1 | -.0001 | .0172 | .0028 | .0000 | -.0002 | .0006 | -.0008 | -.0037 |
| #2 | -.0001 | .0013 | .0027 | -.0002 | -.0005 | .0007 | -.0003 | -.0025 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0004** | **.0010** | **.0025** | F **-.0006** | **-.0002** | **-.0002** | F **-.1261** | **-.0007** |
| #1 | -.0007 | .0009 | .0035 | -.0006 | -.0002 | -.0001 | -.0422 | -.0004 |
| #2 | -.0002 | .0010 | .0014 | -.0007 | -.0003 | -.0002 | -.2100 | -.0010 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0008** | **-.0372** | **.0000** | **-.0001** | **.0014** | **.0014** | F **.2521** | **-.0173** |
| #1 | -.0011 | -.0438 | .0003 | -.0003 | .0014 | .0013 | .2509 | -.0075 |
| #2 | -.0006 | -.0305 | -.0004 | .0001 | .0014 | .0014 | .2532 | -.0272 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0005** | **-.0014** | **-.00019** |
| #1 | .0005 | .0002 | -.0028 | -.00003 |
| #2 | .0003 | -.0012 | -.0001 | -.00036 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5804.9** | **116290.** | **2764.8** | **1469.5** |
| #1 | 5812.2 | 116500. | 2747.6 | 1472.0 |
| #2 | 5797.6 | 116080. | 2782.1 | 1466.9 |

Sample Name: LCSW Acquired: 9/27/2010 11:20:30 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A) K1008697

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **4.955** | **2.476** | **2.528** | **5.107** | **.12487** | **.9416** | **1.251** | **1.260** |
| #1 | 4.945 | 2.476 | 2.526 | 5.089 | .12487 | .9409 | 1.249 | 1.258 |
| #2 | 4.966 | 2.475 | 2.529 | 5.124 | .12487 | .9423 | 1.254 | 1.263 |

| Elem | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.60** | **12.38** | **.5063** | **1.282** | **.6382** | **.6585** | **2.495** | **2.546** |
| #1 | 12.57 | 12.22 | .5063 | 1.280 | .6360 | .6582 | 2.502 | 2.542 |
| #2 | 12.62 | 12.54 | .5063 | 1.285 | .6404 | .6588 | 2.488 | 2.550 |

| Elem | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **12.48** | **1.269** | **.9466** | **1.266** | **12.10** | **2.433** | **.6522** | **12.48** |
| #1 | 12.46 | 1.272 | .9439 | 1.263 | 12.03 | 2.436 | .6509 | 12.43 |
| #2 | 12.50 | 1.267 | .9494 | 1.269 | 12.17 | 2.429 | .6534 | 12.53 |

| Elem | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **1.282** | **1.261** | **1.255** | **.1517** | **-.0159** | **.0003** | **2.603** |
| #1 | .0006 | 1.284 | 1.259 | 1.254 | .1505 | -.0134 | .0004 | 2.595 |
| #2 | -.0002 | 1.280 | 1.263 | 1.257 | .1529 | -.0185 | .0002 | 2.612 |

| Elem | Li6707 | Sr4077 |
|---|---|---|
| Units | ppm | ppm |
| Avg | **.0023** | **.00037** |
| #1 | .0036 | .00026 |
| #2 | .0010 | .00049 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5751.7 | 115030. | 2722.1 | 1460.1 |
| #1 | 5762.0 | 114820. | 2728.3 | 1462.9 |
| #2 | 5741.4 | 115240. | 2715.9 | 1457.3 |

Sample Name: K1008699-003 Acquired: 9/27/2010 11:23:41 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0076** | F **.0030** | **-.0003** | **.0017** | **.0164** | **-.00004** | F **.0061** | **.0000** |
| #1 | .0076 | .0018 | -.0008 | .0018 | .0167 | -.00008 | .0053 | -.0001 |
| #2 | .0076 | .0041 | .0002 | .0016 | .0160 | .00000 | .0069 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | F **12.69** | **12.46** | F **.0004** | **-.0003** | **.0011** | **.0013** | **.0695** |
| #1 | .0000 | 12.68 | 12.45 | .0004 | -.0004 | .0010 | .0013 | .0715 |
| #2 | -.0001 | 12.71 | 12.48 | .0003 | -.0003 | .0012 | .0014 | .0675 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0003** | **6.100** | **6.080** | **.0868** | **.0013** | **-.0013** | **2.116** | **.0018** |
| #1 | .0003 | 6.101 | 6.064 | .0867 | .0014 | -.0013 | 2.104 | .0010 |
| #2 | -.0009 | 6.099 | 6.097 | .0870 | .0013 | -.0012 | 2.127 | .0026 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **7.274** | **.0002** | **.0002** | F **.0015** | F **.0016** | **.3389** | **19.80** |
| #1 | -.0004 | 7.293 | .0007 | .0001 | .0014 | .0016 | .3376 | 19.75 |
| #2 | .0005 | 7.255 | -.0002 | .0003 | .0017 | .0015 | .3402 | 19.85 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0005** | **-.0005** | **.0010** | **.05823** |
| #1 | .0004 | -.0012 | -.0022 | .05819 |
| #2 | .0005 | .0001 | .0042 | .05826 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5699.7** | **114280.** | **2722.0** | **1458.5** |
| #1 | 5698.5 | 114530. | 2713.4 | 1458.5 |
| #2 | 5700.8 | 114020. | 2730.6 | 1458.4 |

Sample Name: K1008699-003D Acquired: 9/27/2010 11:26:53 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0065** | F **.0041** | **.0007** | **.0021** | **.0169** | **.00001** | F **.0061** | **.0000** |
| #1 | .0064 | .0064 | .0016 | .0024 | .0160 | -.00002 | .0056 | .0000 |
| #2 | .0065 | .0019 | -.0001 | .0019 | .0179 | .00004 | .0066 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | F **12.91** | **12.81** | F **-.0001** | **-.0004** | **.0012** | **.0005** | **.0751** |
| #1 | -.0001 | 12.94 | 12.62 | .0001 | -.0005 | .0009 | .0001 | .0742 |
| #2 | -.0001 | 12.89 | 13.01 | -.0003 | -.0004 | .0014 | .0008 | .0760 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0016** | **6.211** | **6.164** | **.0882** | **.0006** | **-.0016** | **2.128** | **.0003** |
| #1 | -.0012 | 6.217 | 6.220 | .0884 | .0005 | -.0016 | 2.167 | .0001 |
| #2 | -.0019 | 6.205 | 6.109 | .0881 | .0007 | -.0016 | 2.088 | .0006 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **7.273** | **.0000** | **.0009** | F **.0014** | F **.0016** | **.3386** | **20.27** |
| #1 | .0002 | 7.317 | -.0005 | .0012 | .0014 | .0015 | .3345 | 20.37 |
| #2 | -.0001 | 7.229 | .0004 | .0005 | .0014 | .0016 | .3428 | 20.18 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **-.0012** | **.0012** | **.05940** |
| #1 | .0005 | -.0012 | .0008 | .05974 |
| #2 | .0007 | -.0012 | .0017 | .05905 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5726.8** | **114810.** | **2715.9** | **1466.0** |
| #1 | 5733.7 | 114890. | 2725.5 | 1467.5 |
| #2 | 5719.9 | 114720. | 2706.2 | 1464.5 |

Sample Name: K1008699-003S Acquired: 9/27/2010 11:30:06 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 | Cd2265 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **1.917** | **.4891** | **.9583** | **2.010** | **.04956** | **.9419** | **.0494** | **.0489** |
| #1 | 1.917 | .4898 | .9607 | 2.019 | .04956 | .9448 | .0494 | .0489 |
| #2 | 1.917 | .4885 | .9559 | 2.000 | .04956 | .9389 | .0495 | .0490 |

| Elem | Ca3158 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 | Pb2203 | Mg2852 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | F **23.06** | **.2001** | **.4969** | **.2451** | **.2545** | **1.070** | **.4960** | F **16.35** |
| #1 | 23.16 | .1999 | .4961 | .2448 | .2549 | 1.080 | .4955 | 16.37 |
| #2 | 22.95 | .2002 | .4976 | .2454 | .2542 | 1.059 | .4965 | 16.33 |

| Elem | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.5865** | **.9507** | **.4878** | F **12.40** | **.9212** | **.0484** | F **17.43** | **.0006** |
| #1 | .5865 | .9505 | .4877 | 12.43 | .9202 | .0491 | 17.49 | .0007 |
| #2 | .5865 | .9509 | .4879 | 12.37 | .9223 | .0477 | 17.37 | .0005 |

| Elem | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.5124** | **.4976** | **.4981** | **.3098** | **20.18** | **.0007** | **.9697** | **.0004** |
| #1 | .5109 | .4971 | .4983 | .3077 | 20.31 | .0005 | .9706 | .0014 |
| #2 | .5138 | .4980 | .4979 | .3120 | 20.05 | .0009 | .9688 | -.0006 |

| Elem | Sr4077 |
|---|---|
| Units | ppm |
| Avg | **.05812** |
| #1 | .05838 |
| #2 | .05787 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5784.7 | 114830. | 2751.7 | 1462.7 |
| #1 | 5782.7 | 114910. | 2749.9 | 1461.6 |
| #2 | 5786.7 | 114740. | 2753.5 | 1463.7 |

Sample Name: K1008699-004 Acquired: 9/27/2010 11:33:17 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0050** | **.0042** | **.0009** | **.0009** | **.0096** | **.00000** | **.0087** | **.0000** |
| #1 | .0051 | .0041 | .0028 | .0011 | .0093 | .00005 | .0092 | .0000 |
| #2 | .0049 | .0042 | -.0010 | .0006 | .0098 | -.00005 | .0082 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **14.69** | **14.75** | **.0002** | **-.0004** | **.0007** | **-.0007** | **.0567** |
| #1 | -.0001 | 14.77 | 14.91 | .0001 | -.0004 | .0003 | -.0005 | .0525 |
| #2 | -.0002 | 14.61 | 14.59 | .0004 | -.0003 | .0011 | -.0009 | .0610 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0012** | **6.053** | **5.965** | **.0647** | **.0013** | **-.0015** | **1.877** | **.0015** |
| #1 | -.0006 | 6.082 | 5.974 | .0649 | .0014 | -.0017 | 1.901 | .0019 |
| #2 | -.0017 | 6.023 | 5.955 | .0646 | .0011 | -.0014 | 1.853 | .0010 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **7.885** | **-.0005** | **.0001** | **.0038** | **.0038** | **.3230** | **15.36** |
| #1 | .0004 | 7.954 | -.0003 | .0001 | .0037 | .0037 | .3285 | 15.37 |
| #2 | .0001 | 7.815 | -.0008 | .0001 | .0039 | .0038 | .3176 | 15.34 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0003** | **-.0016** | **.0023** | **.06379** |
| #1 | .0004 | -.0018 | .0031 | .06391 |
| #2 | .0002 | -.0014 | .0015 | .06368 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5806.6** | **116330.** | **2703.9** | **1472.7** |
| #1 | 5802.0 | 115920. | 2698.9 | 1474.5 |
| #2 | 5811.2 | 116740. | 2709.0 | 1471.0 |

Sample Name: RB Acquired: 9/27/2010 11:36:29 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0006** | **-.0025** | **.0030** | **.0004** | **.0001** | **.00001** | **.0013** | **.0000** |
| #1 | .0007 | -.0051 | .0026 | .0010 | -.0004 | .00001 | .0025 | .0000 |
| #2 | .0005 | .0002 | .0034 | -.0002 | .0006 | .00000 | .0001 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0103** | **.0016** | **-.0001** | **-.0007** | **.0005** | **.0004** | **-.0007** |
| #1 | -.0001 | .0090 | .0017 | -.0002 | -.0008 | .0007 | .0006 | -.0043 |
| #2 | -.0001 | .0115 | .0015 | .0000 | -.0006 | .0004 | .0002 | .0028 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0007** | **.0005** | **-.0032** | **-.0006** | **.0001** | **-.0002** | **-.1601** | **.0001** |
| #1 | -.0008 | .0005 | -.0006 | -.0006 | .0002 | -.0002 | -.1207 | -.0006 |
| #2 | -.0007 | .0004 | -.0057 | -.0006 | .0001 | -.0001 | -.1995 | .0008 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0266** | **-.0001** | **.0000** | **.0001** | **.0000** | **-.0022** | **-.0209** |
| #1 | .0004 | .0339 | .0001 | .0001 | .0000 | .0000 | -.0001 | -.0178 |
| #2 | -.0004 | .0194 | -.0003 | -.0001 | .0002 | .0000 | -.0044 | -.0239 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0020** | **.0015** | **.00007** |
| #1 | .0001 | -.0037 | -.0007 | -.00003 |
| #2 | .0006 | -.0003 | .0037 | .00016 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5751.2** | **115560.** | **2684.6** | **1446.6** |
| #1 | 5768.4 | 115770. | 2710.3 | 1450.1 |
| #2 | 5733.9 | 115360. | 2659.0 | 1443.1 |

Sample Name: K1008437-MB Acquired: 9/27/2010 11:38:58 Type: Unk
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment: (092710A)

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **.0005** | **.0000** | **-.0008** | **-.0003** | **-.00001** | **.0008** | **.0000** |
| #1 | .0006 | -.0017 | .0010 | -.0011 | -.0005 | .00001 | .0009 | .0000 |
| #2 | .0003 | .0027 | -.0009 | -.0006 | .0000 | -.00003 | .0007 | .0000 |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0001** | **.0206** | **.0018** | **-.0003** | **-.0006** | **.0004** | **.0001** | **-.0072** |
| #1 | -.0001 | .0286 | .0017 | -.0004 | -.0007 | .0003 | .0001 | -.0084 |
| #2 | -.0001 | .0127 | .0020 | -.0002 | -.0004 | .0004 | .0002 | -.0059 |

| Elem | Pb2203 | Mg2795 | Mg2852 | Mn2576 | Mo2020 | Ni2216 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0007** | **.0004** | **.0017** | **-.0005** | **.0000** | **-.0003** | **.0013** | **-.0007** |
| #1 | -.0013 | .0004 | -.0001 | -.0005 | -.0001 | -.0002 | -.0252 | -.0011 |
| #2 | -.0002 | .0004 | .0036 | -.0005 | .0000 | -.0003 | .0277 | -.0003 |

| Elem | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 | P_2149 | Si2516 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **.0175** | **.0000** | **.0002** | **.0001** | **.0001** | F **.1486** | **.0007** |
| #1 | -.0002 | .0070 | .0004 | .0000 | .0001 | .0001 | .1497 | -.0081 |
| #2 | -.0009 | .0280 | -.0004 | .0003 | .0001 | .0002 | .1476 | .0095 |

| Elem | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm |
| Avg | **.0002** | **-.0006** | **-.0001** | **-.00005** |
| #1 | .0001 | -.0014 | -.0046 | -.00008 |
| #2 | .0003 | .0003 | .0043 | -.00003 |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5837.9** | **116560.** | **2722.6** | **1470.9** |
| #1 | 5836.2 | 116490. | 2727.9 | 1472.1 |
| #2 | 5839.7 | 116630. | 2717.2 | 1469.8 |

Sample Name: CCVA3 Acquired: 9/27/2010 11:42:03 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2485** | **.2276** | **.2478** | **-.0006** | **.0005** | **.24566** | **.2494** | **.2482** |
| Stddev | .0004 | .0042 | .0005 | .0008 | .0007 | .00185 | .0006 | .0000 |
| %RSD | .1687 | 1.837 | .1998 | 137.8 | 155.8 | .75346 | .2466 | .0127 |
| #1 | .2482 | .2247 | .2475 | -.0011 | .0010 | .24435 | .2499 | .2482 |
| #2 | .2488 | .2306 | .2482 | .0000 | .0000 | .24697 | .2490 | .2482 |
| Check ? | Chk Pass | None | Chk Pass | None | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2473** | **.2575** | **.2466** | **.2482** | **.2464** | **.2474** | **.2478** | **-.0077** |
| Stddev | .0004 | .0144 | .0010 | .0004 | .0001 | .0006 | .0009 | .0014 |
| %RSD | .1629 | 5.576 | .3886 | .1575 | .0266 | .2611 | .3596 | 18.31 |
| #1 | .2470 | .2474 | .2473 | .2484 | .2464 | .2469 | .2472 | -.0087 |
| #2 | .2476 | .2677 | .2459 | .2479 | .2464 | .2478 | .2484 | -.0067 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.2487** | **.2023** | **.2466** | **.2411** | **.2443** | **.2390** | **.2469** | **.2473** |
| Stddev | .0008 | .0155 | .0016 | .0007 | .0001 | .0016 | .0004 | .0002 |
| %RSD | .3146 | 7.682 | .6612 | .3032 | .0501 | .6748 | .1674 | .0652 |
| #1 | .2481 | .1913 | .2478 | .2406 | .2442 | .2379 | .2466 | .2472 |
| #2 | .2492 | .2132 | .2455 | .2417 | .2444 | .2402 | .2472 | .2474 |
| Check ? | Chk Pass | None | Chk Pass | None | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVA3 Acquired: 9/27/2010 11:42:03 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0934** | **.2476** | **.2496** | **-.0138** | **.2476** | **.2485** | **.2494** | **.2477** |
| Stddev | .0064 | .0001 | .0012 | .0187 | .0000 | .0004 | .0012 | .0003 |
| %RSD | 6.828 | .0440 | .4611 | 136.0 | .0119 | .1712 | .4697 | .1027 |
| #1 | -.0889 | .2476 | .2488 | -.0005 | .2476 | .2488 | .2485 | .2479 |
| #2 | -.0979 | .2475 | .2504 | -.0270 | .2476 | .2482 | .2502 | .2476 |
| Check ? | None | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0062** | **-.0132** | **.2471** | **.2473** | **-.0017** | **.00011** |
| Stddev | .0010 | .0028 | .0001 | .0000 | .0007 | .00000 |
| %RSD | 15.60 | 21.48 | .0564 | .0146 | 41.66 | 2.8432 |
| #1 | -.0055 | -.0112 | .2472 | .2473 | -.0012 | .00011 |
| #2 | -.0069 | -.0153 | .2470 | .2472 | -.0023 | .00011 |
| Check ? | None | None | Chk Pass | Chk Pass | None | None |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5806.7 | 115510. | 2716.3 | 1471.9 |
| Stddev | 6.4 | 494. | 27.4 | 1.7 |
| %RSD | .10938 | .42775 | 1.0074 | .11221 |
| #1 | 5802.2 | 115160. | 2696.9 | 1470.8 |
| #2 | 5811.2 | 115860. | 2735.6 | 1473.1 |

Sample Name: CCVB3 Acquired: 9/27/2010 11:45:02 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **7.302** | **9.770** | **.0005** | **.9977** | **10.12** | **.00006** | **-.0001** | **.0002** |
| Stddev | .005 | .000 | .0029 | .0013 | .02 | .00003 | .0004 | .0000 |
| %RSD | .0644 | .0002 | 606.9 | .1282 | .1837 | 45.344 | 263.5 | 23.67 |
| #1 | 7.305 | 9.770 | .0025 | .9986 | 10.13 | .00008 | -.0004 | .0002 |
| #2 | 7.299 | 9.770 | -.0016 | .9967 | 10.11 | .00004 | .0001 | .0002 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **10.02** | **9.929** | **.0001** | **-.0002** | **.0007** | **-.0012** | **9.910** |
| Stddev | .000 | .00 | .039 | .0001 | .0002 | .0001 | .0003 | .010 |
| %RSD | 327.0 | .0319 | .3945 | 74.96 | 101.8 | 12.03 | 29.59 | .1021 |
| #1 | .0000 | 10.02 | 9.957 | .0002 | -.0004 | .0006 | -.0014 | 9.903 |
| #2 | -.0001 | 10.02 | 9.901 | .0001 | -.0001 | .0008 | -.0009 | 9.918 |
| Check ? | None | Chk Pass | None | None | None | None | None | Chk Pass |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **10.09** | **9.842** | **9.913** | **1.008** | **.9893** | **.0003** | **-.0006** |
| Stddev | .0004 | .04 | .021 | .069 | .000 | .0042 | .0002 | .0001 |
| %RSD | 2878. | .3748 | .2096 | .6932 | .0287 | .4203 | 50.25 | 11.87 |
| #1 | -.0002 | 10.06 | 9.856 | 9.961 | 1.008 | .9923 | .0002 | -.0007 |
| #2 | .0003 | 10.11 | 9.827 | 9.864 | 1.008 | .9864 | .0004 | -.0006 |
| Check ? | None | Chk Pass | None | Chk Pass | None | Chk Pass | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

Sample Name: CCVB3 Acquired: 9/27/2010 11:45:02 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **9.644** | **-.0017** | **-.0003** | **9.919** | **.0001** | **.0012** | **.0004** | **.0004** |
| Stddev | .086 | .0020 | .0001 | .042 | .0003 | .0003 | .0001 | .0000 |
| %RSD | .8962 | 113.0 | 28.06 | .4242 | 264.0 | 25.57 | 17.72 | 1.040 |
| #1 | 9.705 | -.0031 | -.0002 | 9.949 | .0003 | .0014 | .0003 | .0004 |
| #2 | 9.583 | -.0003 | -.0003 | 9.889 | -.0001 | .0010 | .0004 | .0004 |
| Check ? | Chk Pass | None | None | Chk Pass | None | None | None | None |
| Value | | | | | | | | |
| Range | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **10.03** | **9.767** | **.0006** | **.0006** | **.9749** | **1.0043** |
| Stddev | .02 | .096 | .0000 | .0002 | .0059 | .0012 |
| %RSD | .2315 | .9836 | 6.206 | 41.99 | .6073 | .11692 |
| #1 | 10.01 | 9.835 | .0006 | .0007 | .9791 | 1.0051 |
| #2 | 10.05 | 9.699 | .0006 | .0004 | .9707 | 1.0035 |
| Check ? | Chk Pass | Chk Pass | None | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5737.9** | **114160.** | **2705.4** | **1459.8** |
| Stddev | .6 | 136. | 13.7 | .2 |
| %RSD | .01086 | .11890 | .50554 | .01488 |
| #1 | 5737.5 | 114060. | 2715.0 | 1460.0 |
| #2 | 5738.4 | 114250. | 2695.7 | 1459.7 |

Sample Name: CCB3 Acquired: 9/27/2010 11:49:09 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | Al1670 | Al3944 | Sb2068 | As1890 | Ba4554 | Be2348 | B_2496 | Cd2144 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0012** | **-.0017** | **.0001** | **-.0010** | **.0004** | **-.00002** | **-.0003** | **.0000** |
| Stddev | .0001 | .0005 | .0029 | .0018 | .0006 | .00004 | .0006 | .0001 |
| %RSD | 7.947 | 31.45 | 3560. | 178.8 | 150.8 | 239.19 | 185.8 | 257.7 |
| #1 | .0013 | -.0014 | .0021 | -.0023 | .0000 | -.00004 | .0001 | .0001 |
| #2 | .0012 | -.0021 | -.0020 | .0003 | .0009 | .00001 | -.0007 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Cd2265 | Ca3158 | Ca3933 | Cr2677 | Co2307 | Cu2247 | Cu3273 | Fe2599 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0000** | **.0103** | **.0016** | **-.0003** | **-.0004** | **.0005** | **.0000** | **-.0031** |
| Stddev | .000 | .0014 | .0001 | .0006 | .0002 | .0003 | .0004 | .0010 |
| %RSD | 220.3 | 13.45 | 5.545 | 245.9 | 45.79 | 66.65 | 2591. | 31.79 |
| #1 | .0000 | .0093 | .0016 | .0002 | -.0002 | .0003 | -.0003 | -.0038 |
| #2 | .0000 | .0113 | .0017 | -.0007 | -.0005 | .0007 | .0003 | -.0024 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Pb2203 | Mg2790 | Mg2795 | Mg2852 | Mn2576 | Mn2605 | Mo2020 | Ni2216 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0005** | **-.0530** | **.0013** | **-.0002** | **-.0004** | **-.0027** | **.0000** | **-.0002** |
| Stddev | .0009 | .0149 | .0000 | .0036 | .0001 | .0002 | .000 | .0001 |
| %RSD | 158.4 | 28.05 | 3.546 | 1835. | 20.12 | 7.506 | 90.99 | 48.49 |
| #1 | .0001 | -.0425 | .0013 | -.0028 | -.0004 | -.0025 | -.0001 | -.0001 |
| #2 | -.0012 | -.0636 | .0013 | .0024 | -.0005 | -.0028 | .0000 | -.0003 |
| Check ? | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB3 Acquired: 9/27/2010 11:49:09 Type: QC
Method: 10C2007(v27) Mode: CONC Corr. Factor: 1.000000
User: admin : : :
Comment:

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Sn1899 | V_2924 | Zn2062 | Zn2138 |
|---|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **-.0535** | **-.0009** | **.0003** | **.0222** | **.0003** | **.0002** | **.0000** | **.0000** |
| Stddev | .0823 | .0010 | .0006 | .0088 | .0001 | .0000 | .0000 | .000 |
| %RSD | 153.9 | 115.3 | 172.6 | 39.50 | 20.26 | 1.753 | 22.86 | 1999. |
| #1 | -.1117 | -.0016 | -.0001 | .0284 | .0003 | .0002 | .0000 | .0000 |
| #2 | .0047 | -.0002 | .0007 | .0160 | .0002 | .0002 | .0001 | .0000 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | P_2149 | Si2516 | Ti3361 | Tl1908 | Li6707 | Sr4077 |
|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppm | ppm | ppm | ppm |
| Avg | **.0004** | **-.0105** | **.0003** | **-.0007** | **-.0030** | **.00019** |
| Stddev | .0016 | .0042 | .0001 | .0005 | .0050 | .00012 |
| %RSD | 465.8 | 39.58 | 37.21 | 78.46 | 168.2 | 64.367 |
| #1 | .0015 | -.0134 | .0003 | -.0010 | -.0065 | .00027 |
| #2 | -.0008 | -.0076 | .0002 | -.0003 | .0006 | .00010 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Y_2243 | Y_3600 | Y_3600-2 | In2306 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | 5775.6 | 115210. | 2716.0 | 1448.2 |
| Stddev | 19.9 | 642. | 14.6 | 9.2 |
| %RSD | .34385 | .55696 | .53632 | .63242 |
| #1 | 5789.6 | 114760. | 2705.7 | 1454.7 |
| #2 | 5761.6 | 115670. | 2726.3 | 1441.7 |

3

Service Request # K1008857_____
Calibration _____092210A_____
QC in calibration__092210A_____
QC Service Request K1009702_____
STARLIMS Batch # 217652_____

# ICP-MS Data Review Form

| | Yes | No | NA |
|---|---|---|---|
| 1. Appropriate standardization completed | X | | |
| 2. ICV within 10 % of true value | X | | |
| 3. CCV's in control | X | | |
| 4. CCB's and/or ICB's below MRL | X | | |
| 5. Method blank below MRL | X | | |
| 6. LCS in control | X | | |
| 7. Spike and duplicate in control | X | | |
| 8. All analytes within instrument linear range | X | | |
| 9. Adequate rinse out time allowed | X | | |
| 10. Internal standards in control | X | | |
| 11. Interferences checked | X | | |
| 12. Se over MRL | | X | |
| 13. CRA run | X | | |
| 14. ICSA and ICSAB in control | X | | |
| 15. Serial dilution run | X | | |
| 16. Post spike in control | X | | |

Report Sb-121.

Comments: Report serial dilution and post spike of sample K1008857

Primary Review by _____ Date 9/22/10
Secondary Review by JDB Date 9/22/10
R:\icp\misc\data review forms\PQ ExCell review form

## Sample List

| Num | Label | Type | Weight | Volume | Dilution | Rack | Row | Column | Height |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Cal. Blk | Blank | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 150 |
| 2 | Cal. Stn | Fully Quant Standard | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 150 |
| 3 | ICV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 3 | 150 |
| 4 | CCV1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 150 |
| 5 | ICB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 150 |
| 6 | CCB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 150 |
| 7 | WATER CRA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 4 | 150 |
| 8 | ICSA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 5 | 145 |
| 9 | ICSAB | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 6 | 145 |
| 10 | CCV2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 11 | CCB2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 12 | K1009583-MB | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 1 | 145 |
| 13 | K1009583-013 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 8 | 145 |
| 14 | K1009583-012 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 3 | 145 |
| 15 | K1009583-012D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 4 | 145 |
| 16 | K1009583-012 1/5L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 5 | 145 |
| 17 | K1009583-012 +20A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 6 | 145 |
| 18 | K1009583-012S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 7 | 145 |
| 19 | LCSW K1009583 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 2 | 145 |
| 20 | WATER CRA | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 4 | 145 |
| 21 | CCV3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 22 | CCB3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 23 | K1009283-MB | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 9 | 145 |
| 24 | K1009283-017 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 12 | 145 |
| 25 | K1009283-017 1/5L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 1 | 145 |
| 26 | K1009283-017 +20A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 2 | 145 |
| 27 | LCSW K109283 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 10 | 145 |
| 28 | LCSW K109283D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 1 | 11 | 145 |
| 29 | K109646-001 From Bottle | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 3 | 145 |
| 30 | K1009702-MB | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 4 | 145 |
| 31 | LCSW K1009702 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 5 | 145 |
| 32 | CCV4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 33 | CCB4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 34 | K1009702-MB | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 4 | 145 |
| 35 | K1009702-003 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 6 | 145 |
| 36 | K1009702-003D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 7 | 145 |
| 37 | K1009702-003 1/5L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 8 | 145 |
| 38 | K1009702-003 +20A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 9 | 145 |
| 39 | K1009702-003S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 10 | 145 |
| 40 | K1008857-003 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 11 | 145 |
| 41 | K1008857-003 1/5L | Unknown | 0 kg | 0 ml | 1.00 | 1 | 4 | 1 | 145 |
| 42 | K1008857-003 +20A | Unknown | 0 kg | 0 ml | 1.00 | 1 | 4 | 2 | 145 |
| 43 | CCV5 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 44 | CCB5 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 45 | K1009161-001 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 2 | 12 | 145 |
| 46 | K1009161-002 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 1 | 145 |
| 47 | K1009161-002D | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 2 | 145 |
| 48 | K1009161-002S | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 3 | 145 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49 | K1009161-003 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 4 | 145 |
| 50 | K1009161-001 DISS | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 5 | 145 |
| 51 | K1009161-002 DISS | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 6 | 145 |
| 52 | K1009161-003 DISS | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 7 | 145 |
| 53 | CCV6 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 54 | CCB6 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 55 | K1009856-001 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 8 | 145 |
| 56 | K1009856-002 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 9 | 145 |
| 57 | K1009856-001 DISS | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 10 | 145 |
| 58 | K1009856-002 DISS | Unknown | 0 kg | 0 ml | 1.00 | 1 | 3 | 11 | 145 |
| 59 | H2O2 Lot #50153024 | Unknown | 0 kg | 0 ml | 1.00 | 1 | 4 | 3 | 145 |
| 60 | CCV7 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 61 | CCB7 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |

## Instrument Setup - Configurations

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 8:05:02 9/22/10
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -370.00 |
| Lens1 | 5.00 |
| Lens2 | -75.00 |
| Lens3 | -25.00 |
| Pole Bias | 5.00 |
| Sampling Depth | 400.00 |
| Horizontal | 0.00 |
| Vertical | 70.00 |
| Cool | 13.00 |
| Auxiliary | 0.80 |
| Nebuliser | 0.82 |
| Forward power | 1,365.00 |
| HT1 Voltage | 1,900.00 |
| HT2 Voltage | 2,600.00 |
| D1 | -38.00 |
| Focus | 10.00 |

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 8:05:02 9/22/10
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -370.00 |
| Lens1 | 5.00 |
| Lens2 | -75.00 |
| Lens3 | -25.00 |
| Pole Bias | 5.00 |
| Sampling Depth | 400.00 |
| Horizontal | 0.00 |
| Vertical | 70.00 |
| Cool | 13.00 |
| Auxiliary | 0.80 |

ExCell Mass Calibration Date: 9/22/2010

| Mass | Mass DAC | Peak Width (AMU) | Error (AMU) | Include | Masses in Tune Solution |
|---|---|---|---|---|---|
| 7.016 | 1549 | 0.766 | -0.006 | TRUE | |
| 9.012 | 2063 | 0.715 | -0.03 | TRUE | Li-7 |
| 23.985 | 5873 | 0.715 | -0.027 | TRUE | Be-9 |
| 24.986 | 6120 | 0.715 | 0.004 | TRUE | Mg-24 |
| 26.982 | 6627 | 0.715 | 0.008 | TRUE | Co-59 |
| 51.94 | 12980 | 0.817 | 0.011 | TRUE | In-115 |
| 53.949 | 13493 | 0.766 | 0.005 | TRUE | Ce-140 |
| 55.935 | 14000 | 0.766 | -0.001 | TRUE | Pb-208 |
| 56.935 | 14247 | 0.766 | 0.03 | TRUE | Bi-209 |
| 58.933 | 14754 | 0.766 | 0.036 | TRUE | U-238 |
| 69.925 | 17562 | 0.766 | 0.001 | TRUE | |
| 75.92 | 19083 | 0.766 | 0.023 | TRUE | |
| 112.904 | 28507 | 0.714 | 0.009 | TRUE | |
| 114.904 | 29014 | 0.714 | 0.018 | TRUE | |
| 118.903 | 30073 | 0.663 | -0.138 | FALSE | |
| 128.905 | 32595 | 0.663 | -0.035 | TRUE | |
| 131.905 | 33362 | 0.663 | -0.046 | TRUE | |
| 139.905 | 35390 | 0.663 | -0.003 | TRUE | |
| 141.908 | 35904 | 0.714 | -0.017 | TRUE | |
| 155.923 | 39472 | 0.663 | -0.003 | TRUE | |
| 205.974 | 52232 | 0.612 | -0.003 | TRUE | |
| 206.976 | 52485 | 0.663 | 0.006 | TRUE | |
| 207.977 | 52739 | 0.612 | 0.011 | TRUE | |
| 208.98 | 52999 | 0.612 | -0.005 | TRUE | |
| 238.051 | 60409 | 0.612 | 0.012 | TRUE | |

Excluded In Calib | Excluded In Results | Peak Fit Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

**Uncorrected ICPS Per Mass**

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

| Run | Label | TimeStamp | 5Bkg | 7Li | 9Be | 59Co | 115In | 208Pb |
|---|---|---|---|---|---|---|---|---|
| 1 | Stability 09-22-2010 | 9/22/2010 8:10:13 A | (P)0.167 | (P)19825.915 | (P)4837.486 | (P)37647.556 | (P)68060.088 | (P)27600.979 |
| 2 | Stability 09-22-2010 | 9/22/2010 8:11:28 A | (P)0.000 | (P)19651.507 | (P)4833.651 | (P)36704.771 | (P)69727.789 | (P)28193.971 |
| 3 | Stability 09-22-2010 | 9/22/2010 8:12:43 A | (P)0.333 | (P)19314.052 | (P)4795.305 | (P)35401.646 | (P)67789.680 | (P)27447.179 |
| 4 | Stability 09-22-2010 | 9/22/2010 8:13:58 A | (P)0.000 | (P)19482.278 | (P)4708.776 | (P)35476.834 | (P)67042.991 | (P)26913.666 |
| 5 | Stability 09-22-2010 | 9/22/2010 8:15:13 A | (P)0.167 | (P)19220.255 | (P)4677.599 | (P)35085.375 | (P)65648.197 | (P)26396.201 |
| | Mean of Stability 09-22 | 9/22/2010 8:10:13 A | (P)0.133 | (P)19498.801 | (P)4770.563 | (P)36063.237 | (P)67653.749 | (P)27310.399 |
| | SD of Stability 09-22-20 | | (P)0.139 | (P)246.128 | (P)73.367 | (P)1079.284 | (P)1490.008 | (P)685.018 |
| | %RSD of Stability 09 | | (P)104.583 | (P)1.262 | (P)1.538 | (P)2.993 | (P)2.202 | (P)2.508 |

| Run | Label | TimeStamp | 209Bi | 208Bkg | 238U |
|---|---|---|---|---|---|
| 1 | Stability 09-22-2010 | 9/22/2010 8:10:13 A | (P)44908.326 | (P)0.167 | (P)47463.571 |
| 2 | Stability 09-22-2010 | 9/22/2010 8:11:28 A | (P)45251.741 | (P)0.000 | (P)48407.906 |
| 3 | Stability 09-22-2010 | 9/22/2010 8:12:43 A | (P)44326.349 | (P)0.000 | (P)47397.682 |
| 4 | Stability 09-22-2010 | 9/22/2010 8:13:58 A | (P)43190.367 | (P)0.000 | (P)46564.278 |
| 5 | Stability 09-22-2010 | 9/22/2010 8:15:13 A | (P)42344.000 | (P)0.000 | (P)45813.180 |
| | Mean of Stability 09-22 | 9/22/2010 8:10:13 A | (P)44004.157 | (P)0.033 | (P)47129.323 |
| | SD of Stability 09-22-20 | | (P)1214.102 | (P)0.075 | (P)983.618 |
| | %RSD of Stability 09 | | (P)2.759 | (P)223.607 | (P)2.087 |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | Cal. Blk | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:30 | | | | | |
| Aluminum | 27 | 0.0059 | -0.0039 | -0.002 | **0** | 0.0052 | 0 |
| Antimony | 121 | 0.0047 | -0.0005 | -0.0041 | **0** | 0.0044 | 0 |
| Antimony | 123 | 0.0047 | -0.003 | -0.0017 | **0** | 0.0041 | 0 |
| Arsenic | 75 | 0.0109 | -0.0406 | 0.0297 | **0** | 0.0364 | 0 |
| Barium | 135 | 0.0015 | 0.001 | -0.0024 | **0** | 0.0021 | 0 |
| Barium | 137 | 0.0001 | -0.0006 | 0.0006 | **0** | 0.0006 | 0 |
| Barium | 138 | -0.0015 | 0.0008 | 0.0007 | **0** | 0.0013 | 0 |
| Beryllium | 9 | -0.0005 | -0.0014 | 0.0019 | **0** | 0.0017 | 0 |
| Cadmium | 111 | 0.0004 | 0.0017 | -0.0021 | **0** | 0.002 | 0 |
| Cadmium | 114 | -0.0001 | 0.0002 | -0.0001 | **0** | 0.0002 | 0 |
| Chromium | 52 | 0.0222 | -0.015 | -0.0072 | **0** | 0.0196 | 0 |
| Chromium | 53 | 0.0174 | 0.0018 | -0.0192 | **0** | 0.0184 | 0 |
| Cobalt | 59 | 0 | 0.0009 | -0.0009 | **0** | 0.0009 | 0 |
| Copper | 63 | -0.0008 | -0.0027 | 0.0035 | **0** | 0.0031 | 0 |
| Copper | 65 | 0.0024 | 0.0012 | -0.0036 | **0** | 0.0032 | 0 |
| Lead | 206 | -0.0018 | -0.0006 | 0.0024 | **0** | 0.0022 | 0 |
| Lead | 207 | -0.0004 | -0.0009 | 0.0013 | **0** | 0.0012 | 0 |
| Lead | 208 | -0.0005 | -0.0007 | 0.0012 | **0** | 0.001 | 0 |
| Manganese | 55 | 0.0003 | -0.0035 | 0.0033 | **0** | 0.0034 | 0 |
| Molybdenum | 95 | -0.0009 | 0.0005 | 0.0003 | **0** | 0.0007 | 0 |
| Molybdenum | 97 | -0.0003 | -0.0016 | 0.0018 | **0** | 0.0017 | 0 |
| Molybdenum | 98 | 0.0013 | -0.0014 | 0.0001 | **0** | 0.0014 | 0 |
| Nickel | 60 | 0.0026 | -0.0036 | 0.0011 | **0** | 0.0032 | 0 |
| Nickel | 62 | -0.0829 | 0.0293 | 0.0536 | **0** | 0.0728 | 0 |
| Selenium | 77 | 0.0468 | -0.0206 | -0.0262 | **0** | 0.0406 | 0 |
| Selenium | 78 | 0.0457 | -0.1741 | 0.1284 | **0** | 0.1563 | 0 |
| Selenium | 82 | 0.0766 | -0.1655 | 0.0889 | **0** | 0.1435 | 0 |
| Silver | 107 | 0.0006 | 0.0001 | -0.0007 | **0** | 0.0007 | 0 |
| Silver | 109 | 0.0006 | -0.0007 | 0.0001 | **0** | 0.0007 | 0 |
| Thallium | 203 | 0.0003 | -0.0002 | 0 | **0** | 0.0002 | 0 |
| Thallium | 205 | 0.0001 | -0.0001 | 0.0001 | **0** | 0.0001 | 0 |
| Uranium | 238 | 0.0009 | -0.0005 | -0.0004 | **0** | 0.0008 | 0 |
| Vanadium | 51 | 0.0067 | -0.0061 | -0.0006 | **0** | 0.0064 | 0 |
| Zinc | 66 | -0.0017 | -0.0066 | 0.0084 | **0** | 0.0076 | 0 |
| Zinc | 67 | -0.0081 | -0.0106 | 0.0187 | **0** | 0.0163 | 0 |
| Zinc | 68 | 0.0043 | -0.0082 | 0.004 | **0** | 0.0071 | 0 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.987 | 1.003 | 1.01 | **0.987** | n/a | n/a |
| Scandium | 45 | 0.918 | 1.024 | 1.071 | **0.918** | n/a | n/a |
| Gallium | 71 | 0.922 | 1.018 | 1.072 | **0.922** | n/a | n/a |
| Rhodium | 103 | 0.96 | 1.009 | 1.033 | **0.96** | n/a | n/a |
| Indium | 115 | 0.975 | 1.007 | 1.019 | **0.975** | n/a | n/a |
| Lutetium | 175 | 1.005 | 1.007 | 0.989 | **1.005** | n/a | n/a |
| Thorium | 232 | 0.992 | 0.988 | 1.021 | **0.992** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | Cal. Stn | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:34 | | | | | |
| Aluminum | 27 | 24.98 | 24.63 | 25.39 | **25** | 0.3836 | 1.535 |
| Antimony | 121 | 25.02 | 24.93 | 25.05 | **25** | 0.063 | 0.2518 |
| Antimony | 123 | 24.54 | 25.22 | 25.24 | **25** | 0.402 | 1.608 |
| Arsenic | 75 | 25.07 | 24.99 | 24.94 | **25** | 0.0678 | 0.2712 |
| Barium | 135 | 24.8 | 25.03 | 25.16 | **25** | 0.1822 | 0.7286 |
| Barium | 137 | 24.9 | 24.78 | 25.33 | **25** | 0.2897 | 1.159 |
| Barium | 138 | 25.03 | 24.99 | 24.98 | **25** | 0.029 | 0.1158 |
| Beryllium | 9 | 25.07 | 25.14 | 24.79 | **25** | 0.1878 | 0.751 |
| Cadmium | 111 | 24.85 | 25.01 | 25.14 | **25** | 0.1483 | 0.5933 |
| Cadmium | 114 | 24.9 | 24.93 | 25.17 | **25** | 0.1475 | 0.59 |
| Chromium | 52 | 25.02 | 24.71 | 25.27 | **25** | 0.2793 | 1.117 |
| Chromium | 53 | 25.1 | 25.06 | 24.84 | **25** | 0.1363 | 0.5454 |
| Cobalt | 59 | 25.12 | 24.93 | 24.95 | **25** | 0.1014 | 0.4056 |
| Copper | 63 | 24.88 | 25.21 | 24.92 | **25** | 0.1803 | 0.721 |
| Copper | 65 | 24.68 | 25.14 | 25.18 | **25** | 0.2782 | 1.113 |
| Lead | 206 | 24.59 | 25.03 | 25.38 | **25** | 0.3913 | 1.565 |
| Lead | 207 | 24.8 | 24.76 | 25.44 | **25** | 0.3799 | 1.519 |
| Lead | 208 | 24.66 | 24.96 | 25.38 | **25** | 0.3595 | 1.438 |
| Manganese | 55 | 25.29 | 25.17 | 24.54 | **25** | 0.405 | 1.62 |
| Molybdenum | 95 | 24.84 | 24.78 | 25.39 | **25** | 0.3347 | 1.339 |
| Molybdenum | 97 | 24.62 | 25.04 | 25.34 | **25** | 0.3603 | 1.441 |
| Molybdenum | 98 | 24.73 | 24.91 | 25.36 | **25** | 0.3256 | 1.302 |
| Nickel | 60 | 24.72 | 25.18 | 25.1 | **25** | 0.243 | 0.9718 |
| Nickel | 62 | 24.63 | 25.04 | 25.32 | **25** | 0.349 | 1.396 |
| Selenium | 77 | 24.35 | 24.76 | 25.9 | **25** | 0.8049 | 3.22 |
| Selenium | 78 | 24.82 | 25.28 | 24.89 | **25** | 0.2486 | 0.9942 |
| Selenium | 82 | 24.67 | 25.28 | 25.04 | **25** | 0.3075 | 1.23 |
| Silver | 107 | 24.93 | 24.88 | 25.18 | **25** | 0.1613 | 0.6454 |
| Silver | 109 | 25.05 | 24.79 | 25.16 | **25** | 0.1921 | 0.7684 |
| Thallium | 203 | 24.89 | 25.1 | 25.01 | **25** | 0.1034 | 0.4136 |
| Thallium | 205 | 24.85 | 24.84 | 25.31 | **25** | 0.2726 | 1.09 |
| Uranium | 238 | 24.71 | 24.99 | 25.3 | **25** | 0.2938 | 1.175 |
| Vanadium | 51 | 24.84 | 24.94 | 25.22 | **25** | 0.1979 | 0.7915 |
| Zinc | 66 | 24.98 | 25.12 | 24.9 | **25** | 0.1093 | 0.4371 |
| Zinc | 67 | 25.08 | 25.05 | 24.87 | **25** | 0.1115 | 0.4459 |
| Zinc | 68 | 24.58 | 25.17 | 25.25 | **25** | 0.3624 | 1.449 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.958 | 0.958 | 0.968 | **0.958** | n/a | n/a |
| Scandium | 45 | 0.992 | 1.035 | 1.041 | **0.992** | n/a | n/a |
| Gallium | 71 | 0.969 | 1.022 | 1.037 | **0.969** | n/a | n/a |
| Rhodium | 103 | 0.971 | 0.988 | 1.011 | **0.971** | n/a | n/a |
| Indium | 115 | 0.969 | 0.972 | 0.979 | **0.969** | n/a | n/a |
| Lutetium | 175 | 0.968 | 0.975 | 0.993 | **0.968** | n/a | n/a |
| Thorium | 232 | 0.952 | 0.951 | 0.97 | **0.952** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | ICV1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:39 | | | | | |
| Aluminum | 27 | 102.4 | 104.5 | 103.1 | **103.3** | 1.071 | 1.037 |
| Antimony | 121 | 26.01 | 26.5 | 25.93 | **26.14** | 0.3093 | 1.183 |
| Antimony | 123 | 26.11 | 26.82 | 26.38 | **26.44** | 0.3548 | 1.342 |
| Arsenic | 75 | 26.66 | 27.26 | 26.78 | **26.9** | 0.3178 | 1.181 |
| Barium | 135 | 104.7 | 105.8 | 104.4 | **105** | 0.726 | 0.6916 |
| Barium | 137 | 106.8 | 105.1 | 105.4 | **105.8** | 0.9147 | 0.8648 |
| Barium | 138 | 105.7 | 106.9 | 107.2 | **106.6** | 0.7718 | 0.7239 |
| Beryllium | 9 | 2.735 | 2.645 | 2.607 | **2.662** | 0.0653 | 2.453 |
| Cadmium | 111 | 13.34 | 13.43 | 13.48 | **13.42** | 0.0705 | 0.5258 |
| Cadmium | 114 | 14.3 | 14.31 | 13.93 | **14.18** | 0.2184 | 1.54 |
| Chromium | 52 | 10.44 | 10.62 | 10.7 | **10.59** | 0.1368 | 1.292 |
| Chromium | 53 | 10.53 | 10.42 | 10.8 | **10.59** | 0.1957 | 1.849 |
| Cobalt | 59 | 26.9 | 26.69 | 26.68 | **26.76** | 0.124 | 0.4633 |
| Copper | 63 | 13.45 | 13.51 | 13.25 | **13.4** | 0.1333 | 0.9944 |
| Copper | 65 | 13.23 | 13.26 | 13.46 | **13.32** | 0.1228 | 0.9221 |
| Lead | 206 | 26.87 | 26.78 | 27.08 | **26.91** | 0.1558 | 0.5789 |
| Lead | 207 | 25.97 | 25.78 | 25.71 | **25.82** | 0.1382 | 0.5352 |
| Lead | 208 | 25.91 | 25.74 | 25.92 | **25.86** | 0.1029 | 0.3981 |
| Manganese | 55 | 26.96 | 26.63 | 27.09 | **26.89** | 0.2378 | 0.8841 |
| Molybdenum | 95 | 27.05 | 26.89 | 26.76 | **26.9** | 0.1414 | 0.5255 |
| Molybdenum | 97 | 27.14 | 26.82 | 27.07 | **27.01** | 0.1721 | 0.6371 |
| Molybdenum | 98 | 27.1 | 27.21 | 27.15 | **27.15** | 0.0561 | 0.2064 |
| Nickel | 60 | 26.49 | 26.92 | 26.51 | **26.64** | 0.2451 | 0.92 |
| Nickel | 62 | 26.43 | 27.28 | 25.88 | **26.53** | 0.7036 | 2.653 |
| Selenium | 77 | 27.39 | 26.4 | 26.9 | **26.9** | 0.4957 | 1.843 |
| Selenium | 78 | 26.28 | 26.82 | 26.85 | **26.65** | 0.3175 | 1.192 |
| Selenium | 82 | 25.91 | 27.42 | 26.1 | **26.48** | 0.8241 | 3.112 |
| Silver | 107 | 12.63 | 12.66 | 12.62 | **12.64** | 0.0198 | 0.1562 |
| Silver | 109 | 12.7 | 12.9 | 12.64 | **12.75** | 0.1403 | 1.101 |
| Thallium | 203 | 26 | 26.22 | 26.43 | **26.22** | 0.2126 | 0.811 |
| Thallium | 205 | 26.03 | 26.04 | 26.49 | **26.19** | 0.2606 | 0.9949 |
| Uranium | 238 | 26.31 | 26.55 | 26.76 | **26.54** | 0.2253 | 0.8488 |
| Vanadium | 51 | 27.11 | 26.93 | 27.36 | **27.13** | 0.2181 | 0.804 |
| Zinc | 66 | 26.52 | 26.8 | 26.34 | **26.55** | 0.2334 | 0.879 |
| Zinc | 67 | 31.09 | 31.25 | 31.3 | **31.21** | 0.1066 | 0.3415 |
| Zinc | 68 | 30.22 | 30.25 | 30.6 | **30.36** | 0.2115 | 0.6966 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.974 | 0.945 | 0.944 | **0.974** | n/a | n/a |
| Scandium | 45 | 0.976 | 1.018 | 1.036 | **0.976** | n/a | n/a |
| Gallium | 71 | 0.984 | 1.029 | 1.035 | **0.984** | n/a | n/a |
| Rhodium | 103 | 0.973 | 0.992 | 0.993 | **0.973** | n/a | n/a |
| Indium | 115 | 0.962 | 0.978 | 0.969 | **0.962** | n/a | n/a |
| Lutetium | 175 | 0.993 | 0.967 | 0.969 | **0.993** | n/a | n/a |
| Thorium | 232 | 0.949 | 0.95 | 0.963 | **0.949** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCV1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:43 | | | | | |
| Aluminum | 27 | 24.08 | 24.1 | 23.88 | **24.02** | 0.1188 | 0.4947 |
| Antimony | 121 | 25.32 | 25.2 | 25.07 | **25.19** | 0.1214 | 0.4818 |
| Antimony | 123 | 25.33 | 25.63 | 25.01 | **25.32** | 0.31 | 1.224 |
| Arsenic | 75 | 25.16 | 24.99 | 24.76 | **24.97** | 0.2043 | 0.8182 |
| Barium | 135 | 24.67 | 25.12 | 24.26 | **24.68** | 0.4298 | 1.741 |
| Barium | 137 | 25 | 24.81 | 24.61 | **24.81** | 0.1945 | 0.7839 |
| Barium | 138 | 25.11 | 25.44 | 24.98 | **25.18** | 0.241 | 0.9572 |
| Beryllium | 9 | 24.23 | 22.99 | 22.86 | **23.36** | 0.7534 | 3.225 |
| Cadmium | 111 | 24.76 | 25.27 | 24.82 | **24.95** | 0.2805 | 1.124 |
| Cadmium | 114 | 24.82 | 24.98 | 24.87 | **24.89** | 0.0816 | 0.3278 |
| Chromium | 52 | 24.92 | 25.35 | 24.61 | **24.96** | 0.3688 | 1.478 |
| Chromium | 53 | 24.96 | 24.94 | 24.32 | **24.74** | 0.3681 | 1.488 |
| Cobalt | 59 | 24.66 | 25.24 | 24.65 | **24.85** | 0.3396 | 1.366 |
| Copper | 63 | 25.3 | 24.97 | 24.63 | **24.97** | 0.3335 | 1.336 |
| Copper | 65 | 24.84 | 25.24 | 24.31 | **24.8** | 0.4681 | 1.888 |
| Lead | 206 | 25.09 | 25.05 | 24.37 | **24.84** | 0.408 | 1.643 |
| Lead | 207 | 24.87 | 24.92 | 24.46 | **24.75** | 0.2539 | 1.026 |
| Lead | 208 | 24.87 | 24.64 | 24.15 | **24.56** | 0.3678 | 1.498 |
| Manganese | 55 | 25.04 | 25.46 | 24.42 | **24.97** | 0.5253 | 2.104 |
| Molybdenum | 95 | 24.64 | 25.03 | 24.66 | **24.78** | 0.2167 | 0.8747 |
| Molybdenum | 97 | 24.71 | 24.96 | 24.36 | **24.68** | 0.3057 | 1.239 |
| Molybdenum | 98 | 24.79 | 25.4 | 24.84 | **25.01** | 0.3348 | 1.339 |
| Nickel | 60 | 25.35 | 25.6 | 24.49 | **25.15** | 0.585 | 2.327 |
| Nickel | 62 | 25.16 | 26.14 | 24.46 | **25.25** | 0.8439 | 3.342 |
| Selenium | 77 | 25.35 | 25.51 | 24.09 | **24.98** | 0.7794 | 3.12 |
| Selenium | 78 | 24.69 | 24.83 | 24.68 | **24.73** | 0.0835 | 0.3375 |
| Selenium | 82 | 24.99 | 25.3 | 24.66 | **24.98** | 0.3167 | 1.268 |
| Silver | 107 | 24.35 | 24.41 | 24.27 | **24.34** | 0.0727 | 0.2987 |
| Silver | 109 | 24.67 | 25.36 | 24.55 | **24.86** | 0.4387 | 1.765 |
| Thallium | 203 | 24.67 | 25 | 24.76 | **24.81** | 0.1746 | 0.7036 |
| Thallium | 205 | 24.99 | 25.22 | 24.55 | **24.92** | 0.3424 | 1.374 |
| Uranium | 238 | 25.35 | 25.49 | 25.34 | **25.4** | 0.0853 | 0.3357 |
| Vanadium | 51 | 24.81 | 25.33 | 24.75 | **24.96** | 0.3166 | 1.268 |
| Zinc | 66 | 24.71 | 25.05 | 24.7 | **24.82** | 0.2007 | 0.8088 |
| Zinc | 67 | 25.1 | 25.07 | 24.04 | **24.74** | 0.6028 | 2.437 |
| Zinc | 68 | 25.49 | 25.5 | 24.46 | **25.15** | 0.5974 | 2.375 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.945 | 0.916 | 0.922 | **0.945** | n/a | n/a |
| Scandium | 45 | 1.023 | 1.068 | 1.064 | **1.023** | n/a | n/a |
| Gallium | 71 | 1.007 | 1.058 | 1.05 | **1.007** | n/a | n/a |
| Rhodium | 103 | 0.978 | 1.015 | 1.006 | **0.978** | n/a | n/a |
| Indium | 115 | 0.99 | 1.006 | 0.999 | **0.99** | n/a | n/a |
| Lutetium | 175 | 1.007 | 0.996 | 0.978 | **1.007** | n/a | n/a |
| Thorium | 232 | 1.002 | 0.991 | 0.99 | **1.002** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | ICB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:54 | | | | | |
| Aluminum | 27 | 0.0031 | 0.0075 | -0.0016 | **0.003** | 0.0045 | 152.3 |
| Antimony | 121 | 0.0472 | 0.0445 | 0.0311 | **0.0409** | 0.0086 | 21.1 |
| Antimony | 123 | 0.0515 | 0.0404 | 0.0362 | **0.0427** | 0.0079 | 18.59 |
| Arsenic | 75 | -0.0361 | 0.1115 | -0.0234 | **0.0174** | 0.0818 | 471 |
| Barium | 135 | 0.0047 | -0.003 | 0.002 | **0.0012** | 0.0039 | 317.3 |
| Barium | 137 | 0.0044 | 0.002 | 0 | **0.0021** | 0.0022 | 103.3 |
| Barium | 138 | 0.0003 | 0.005 | 0.0046 | **0.0033** | 0.0026 | 79.4 |
| Beryllium | 9 | 0.0003 | 0.003 | 0.0028 | **0.002** | 0.0015 | 72.9 |
| Cadmium | 111 | 0.0004 | 0.0025 | 0.0006 | **0.0012** | 0.0012 | 102.4 |
| Cadmium | 114 | 0.0012 | 0.0001 | -0.0012 | **0** | 0.0012 | 3327 |
| Chromium | 52 | 0.032 | -0.0221 | -0.0281 | **-0.0061** | 0.0331 | 547 |
| Chromium | 53 | 0.0272 | 0.0323 | 0.0068 | **0.0221** | 0.0135 | 61.13 |
| Cobalt | 59 | -0.0004 | 0.0014 | -0.0008 | **0.0001** | 0.0012 | 1671 |
| Copper | 63 | -0.0007 | 0.0036 | -0.0008 | **0.0007** | 0.0025 | 361.4 |
| Copper | 65 | 0.0021 | 0.0067 | 0.0067 | **0.0052** | 0.0026 | 50.84 |
| Lead | 206 | -0.0011 | 0.0005 | 0.0017 | **0.0004** | 0.0014 | 375.5 |
| Lead | 207 | 0.0026 | 0.0012 | 0.0018 | **0.0018** | 0.0007 | 36.9 |
| Lead | 208 | 0.0009 | 0.0006 | 0.0014 | **0.001** | 0.0004 | 38.83 |
| Manganese | 55 | 0.0021 | 0.0032 | 0.006 | **0.0037** | 0.002 | 53.95 |
| Molybdenum | 95 | 0.0118 | 0.0097 | 0.0054 | **0.009** | 0.0033 | 36.34 |
| Molybdenum | 97 | 0.0084 | 0.0063 | 0.0052 | **0.0066** | 0.0016 | 24.78 |
| Molybdenum | 98 | 0.0106 | 0.0085 | 0.0095 | **0.0095** | 0.001 | 10.85 |
| Nickel | 60 | -0.0102 | -0.0184 | -0.0078 | **-0.0122** | 0.0056 | 45.76 |
| Nickel | 62 | 0.0575 | 0.067 | -0.0129 | **0.0372** | 0.0437 | 117.3 |
| Selenium | 77 | -0.0303 | -0.1874 | -0.0188 | **-0.0788** | 0.0942 | 119.5 |
| Selenium | 78 | -0.0293 | -0.2804 | 0.1052 | **-0.0681** | 0.1957 | 287.3 |
| Selenium | 82 | -0.1904 | 0.2353 | -0.1074 | **-0.0208** | 0.2256 | 1084 |
| Silver | 107 | 0.0032 | 0.0033 | 0.0012 | **0.0026** | 0.0012 | 45.81 |
| Silver | 109 | 0.0026 | 0.0009 | 0.002 | **0.0018** | 0.0009 | 48.67 |
| Thallium | 203 | 0.0033 | 0.0017 | 0.0006 | **0.0019** | 0.0014 | 74.01 |
| Thallium | 205 | 0.0018 | 0.002 | 0.001 | **0.0016** | 0.0005 | 32.28 |
| Uranium | 238 | -0.0006 | -0.001 | -0.0007 | **-0.0008** | 0.0002 | 32.59 |
| Vanadium | 51 | 0.0152 | -0.018 | -0.0126 | **-0.0051** | 0.0178 | 348.6 |
| Zinc | 66 | -0.0047 | 0.0069 | 0.0013 | **0.0012** | 0.0058 | 496.5 |
| Zinc | 67 | -0.0083 | -0.0007 | 0.0375 | **0.0095** | 0.0246 | 258.3 |
| Zinc | 68 | 0.0085 | 0.0144 | 0.022 | **0.015** | 0.0067 | 45.1 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.031 | 1.011 | 0.991 | **1.031** | n/a | n/a |
| Scandium | 45 | 0.979 | 1.057 | 1.08 | **0.979** | n/a | n/a |
| Gallium | 71 | 0.977 | 1.09 | 1.085 | **0.977** | n/a | n/a |
| Rhodium | 103 | 1.021 | 1.037 | 1.054 | **1.021** | n/a | n/a |
| Indium | 115 | 1.025 | 1.044 | 1.059 | **1.025** | n/a | n/a |
| Lutetium | 175 | 1.062 | 1.052 | 1.062 | **1.062** | n/a | n/a |
| Thorium | 232 | 1.066 | 1.05 | 1.054 | **1.066** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 8:59 | | | | | |
| Aluminum | 27 | 0.0083 | 0.0307 | 0.0034 | **0.0141** | 0.0145 | 102.9 |
| Antimony | 121 | 0.0223 | 0.0155 | 0.016 | **0.0179** | 0.0038 | 21.16 |
| Antimony | 123 | 0.0248 | 0.0185 | 0.0163 | **0.0199** | 0.0044 | 22.36 |
| Arsenic | 75 | -0.006 | -0.0713 | -0.1133 | **-0.0635** | 0.0541 | 85.12 |
| Barium | 135 | 0.0007 | 0.0021 | -0.0008 | **0.0006** | 0.0014 | 219.3 |
| Barium | 137 | 0.0009 | 0.005 | 0.003 | **0.003** | 0.0021 | 69.98 |
| Barium | 138 | 0.0033 | 0.0007 | 0.0048 | **0.0029** | 0.002 | 69.69 |
| Beryllium | 9 | 0.0032 | 0.0004 | 0.0043 | **0.0026** | 0.002 | 76.94 |
| Cadmium | 111 | -0.002 | -0.0015 | 0.0007 | **-0.0009** | 0.0014 | 150.9 |
| Cadmium | 114 | 0.0028 | 0.0004 | 0.0011 | **0.0014** | 0.0012 | 85.87 |
| Chromium | 52 | 0.0305 | 0.0195 | -0.0339 | **0.0053** | 0.0344 | 642.8 |
| Chromium | 53 | 0.0396 | 0.0105 | -0.0359 | **0.0047** | 0.0381 | 804.4 |
| Cobalt | 59 | 0.0002 | 0.0005 | -0.0004 | **0.0001** | 0.0004 | 462.1 |
| Copper | 63 | 0.0033 | 0.0062 | -0.0034 | **0.002** | 0.0049 | 246.2 |
| Copper | 65 | 0.0021 | 0.0025 | 0.0071 | **0.0039** | 0.0028 | 71.9 |
| Lead | 206 | 0 | -0.0001 | 0.0016 | **0.0005** | 0.001 | 188.7 |
| Lead | 207 | 0.0028 | 0.0012 | 0.0026 | **0.0022** | 0.0009 | 40.4 |
| Lead | 208 | 0.0014 | 0.0013 | 0.0018 | **0.0015** | 0.0003 | 19.25 |
| Manganese | 55 | 0.002 | 0.0068 | 0.0006 | **0.0031** | 0.0032 | 103.5 |
| Molybdenum | 95 | 0.0061 | 0.0032 | 0.0021 | **0.0038** | 0.0021 | 55.12 |
| Molybdenum | 97 | 0.0028 | 0.0037 | 0.0025 | **0.003** | 0.0006 | 20.69 |
| Molybdenum | 98 | 0.0052 | 0.0039 | 0.0038 | **0.0043** | 0.0008 | 19.41 |
| Nickel | 60 | -0.0134 | 0.0124 | 0.0026 | **0.0005** | 0.013 | 2608 |
| Nickel | 62 | 0.0044 | -0.0858 | 0.0542 | **-0.0091** | 0.071 | 782.7 |
| Selenium | 77 | -0.0745 | 0.0228 | 0.0034 | **-0.0161** | 0.0515 | 319.3 |
| Selenium | 78 | 0.0116 | 0.0958 | -0.1064 | **0.0004** | 0.1016 | 28950 |
| Selenium | 82 | -0.084 | -0.2469 | -0.4153 | **-0.2487** | 0.1657 | 66.6 |
| Silver | 107 | -0.0002 | 0.0012 | 0.0008 | **0.0006** | 0.0007 | 114.7 |
| Silver | 109 | 0.0016 | -0.0001 | 0.0008 | **0.0008** | 0.0008 | 107.9 |
| Thallium | 203 | 0.0029 | 0.0003 | 0.0006 | **0.0013** | 0.0015 | 115.3 |
| Thallium | 205 | 0.0007 | 0.0005 | 0.0004 | **0.0005** | 0.0001 | 25.36 |
| Uranium | 238 | -0.0019 | -0.0026 | -0.0019 | **-0.0021** | 0.0004 | 20.37 |
| Vanadium | 51 | 0.0055 | 0.0025 | -0.0091 | **-0.0004** | 0.0077 | 2135 |
| Zinc | 66 | -0.0019 | 0.0154 | 0.0161 | **0.0099** | 0.0102 | 103.4 |
| Zinc | 67 | 0.0339 | 0.0484 | 0.0017 | **0.028** | 0.0239 | 85.46 |
| Zinc | 68 | 0.01 | 0.0113 | 0.0072 | **0.0095** | 0.0021 | 21.69 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.042 | 1.03 | 1.033 | **1.042** | n/a | n/a |
| Scandium | 45 | 1.022 | 1.105 | 1.084 | **1.022** | n/a | n/a |
| Gallium | 71 | 1.034 | 1.084 | 1.113 | **1.034** | n/a | n/a |
| Rhodium | 103 | 1.04 | 1.053 | 1.067 | **1.04** | n/a | n/a |
| Indium | 115 | 1.053 | 1.056 | 1.067 | **1.053** | n/a | n/a |
| Lutetium | 175 | 1.098 | 1.081 | 1.082 | **1.098** | n/a | n/a |
| Thorium | 232 | 1.087 | 1.076 | 1.064 | **1.087** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | WATER CRA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:03 | | | | | |
| Aluminum | 27 | 2.004 | 1.92 | 1.977 | **1.967** | 0.0429 | 2.18 |
| Antimony | 121 | 0.0658 | 0.0594 | 0.054 | **0.0598** | 0.0059 | 9.871 |
| Antimony | 123 | 0.0578 | 0.0637 | 0.059 | **0.0602** | 0.0031 | 5.201 |
| Arsenic | 75 | 0.561 | 0.5738 | 0.5127 | **0.5492** | 0.0323 | 5.871 |
| Barium | 135 | 0.0589 | 0.0404 | 0.0612 | **0.0535** | 0.0114 | 21.34 |
| Barium | 137 | 0.0401 | 0.0506 | 0.0469 | **0.0458** | 0.0053 | 11.67 |
| Barium | 138 | 0.0506 | 0.052 | 0.0532 | **0.0519** | 0.0013 | 2.524 |
| Beryllium | 9 | 0.0157 | 0.0209 | 0.0251 | **0.0206** | 0.0047 | 22.91 |
| Cadmium | 111 | 0.0252 | 0.0221 | 0.0172 | **0.0215** | 0.004 | 18.61 |
| Cadmium | 114 | 0.0222 | 0.0227 | 0.0207 | **0.0218** | 0.001 | 4.784 |
| Chromium | 52 | 0.2009 | 0.1747 | 0.1925 | **0.1893** | 0.0134 | 7.071 |
| Chromium | 53 | 0.1927 | 0.1923 | 0.1889 | **0.1913** | 0.0021 | 1.08 |
| Cobalt | 59 | 0.02 | 0.0214 | 0.0206 | **0.0206** | 0.0007 | 3.302 |
| Copper | 63 | 0.1083 | 0.1098 | 0.105 | **0.1077** | 0.0025 | 2.294 |
| Copper | 65 | 0.1227 | 0.1148 | 0.1108 | **0.1161** | 0.0061 | 5.234 |
| Lead | 206 | 0.0214 | 0.0251 | 0.0238 | **0.0235** | 0.0019 | 8.08 |
| Lead | 207 | 0.0182 | 0.0236 | 0.0231 | **0.0216** | 0.003 | 13.67 |
| Lead | 208 | 0.0208 | 0.025 | 0.0222 | **0.0227** | 0.0021 | 9.476 |
| Manganese | 55 | 0.0557 | 0.0512 | 0.0563 | **0.0544** | 0.0028 | 5.156 |
| Molybdenum | 95 | 0.0632 | 0.0546 | 0.053 | **0.0569** | 0.0055 | 9.66 |
| Molybdenum | 97 | 0.0488 | 0.0578 | 0.0434 | **0.05** | 0.0073 | 14.6 |
| Molybdenum | 98 | 0.0599 | 0.0539 | 0.0555 | **0.0564** | 0.0031 | 5.513 |
| Nickel | 60 | 0.2218 | 0.2023 | 0.1978 | **0.2073** | 0.0127 | 6.139 |
| Nickel | 62 | 0.213 | 0.2675 | 0.144 | **0.2081** | 0.0619 | 29.74 |
| Selenium | 77 | 0.7206 | 0.9831 | 0.8398 | **0.8479** | 0.1314 | 15.5 |
| Selenium | 78 | 1 | 0.9006 | 0.8061 | **0.9022** | 0.097 | 10.75 |
| Selenium | 82 | 0.84 | 1.106 | 0.7215 | **0.8893** | 0.1971 | 22.16 |
| Silver | 107 | 0.0201 | 0.0188 | 0.0193 | **0.0194** | 0.0007 | 3.43 |
| Silver | 109 | 0.0232 | 0.0192 | 0.0195 | **0.0206** | 0.0022 | 10.69 |
| Thallium | 203 | 0.0183 | 0.0231 | 0.0213 | **0.0209** | 0.0024 | 11.46 |
| Thallium | 205 | 0.0197 | 0.0204 | 0.0179 | **0.0194** | 0.0013 | 6.852 |
| Uranium | 238 | 0.0169 | 0.0163 | 0.0163 | **0.0165** | 0.0004 | 2.223 |
| Vanadium | 51 | 0.2027 | 0.1893 | 0.1849 | **0.1923** | 0.0092 | 4.804 |
| Zinc | 66 | 0.5269 | 0.5248 | 0.5587 | **0.5368** | 0.019 | 3.545 |
| Zinc | 67 | 0.4616 | 0.5115 | 0.5385 | **0.5039** | 0.039 | 7.737 |
| Zinc | 68 | 0.5116 | 0.4716 | 0.5045 | **0.4959** | 0.0213 | 4.302 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.052 | 1.007 | 1.023 | **1.052** | n/a | n/a |
| Scandium | 45 | 1.055 | 1.075 | 1.08 | **1.055** | n/a | n/a |
| Gallium | 71 | 1.042 | 1.108 | 1.104 | **1.042** | n/a | n/a |
| Rhodium | 103 | 1.044 | 1.068 | 1.061 | **1.044** | n/a | n/a |
| Indium | 115 | 1.057 | 1.074 | 1.067 | **1.057** | n/a | n/a |
| Lutetium | 175 | 1.101 | 1.097 | 1.09 | **1.101** | n/a | n/a |
| Thorium | 232 | 1.09 | 1.075 | 1.084 | **1.09** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | ICSA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:09 | | | | | |
| Aluminum | 27 | 22540 | 22010 | 22750 | **22430** | 380.8 | 1.698 |
| Antimony | 121 | 0.0781 | 0.0852 | 0.082 | **0.0817** | 0.0036 | 4.354 |
| Antimony | 123 | 0.0862 | 0.0765 | 0.0782 | **0.0803** | 0.0052 | 6.472 |
| Arsenic | 75 | 0.0675 | -0.0464 | 0.0544 | **0.0252** | 0.0623 | 247.5 |
| Barium | 135 | 0.337 | 0.3303 | 0.3425 | **0.3366** | 0.0061 | 1.805 |
| Barium | 137 | 0.3422 | 0.3299 | 0.3547 | **0.3422** | 0.0124 | 3.632 |
| Barium | 138 | 0.3595 | 0.3661 | 0.3655 | **0.3637** | 0.0036 | 1.001 |
| Beryllium | 9 | 0.0364 | 0.0368 | 0.0327 | **0.0353** | 0.0023 | 6.435 |
| Cadmium | 111 | 0.3845 | 0.3776 | 0.3967 | **0.3862** | 0.0097 | 2.506 |
| Cadmium | 114 | 0.3605 | 0.3814 | 0.3585 | **0.3668** | 0.0127 | 3.464 |
| Chromium | 52 | 0.7284 | 0.7653 | 0.7 | **0.7312** | 0.0327 | 4.477 |
| Chromium | 53 | 2.384 | 2.538 | 2.354 | **2.426** | 0.0983 | 4.054 |
| Cobalt | 59 | 0.8954 | 0.9087 | 0.9127 | **0.9056** | 0.0091 | 1.003 |
| Copper | 63 | 2.258 | 2.228 | 2.242 | **2.243** | 0.015 | 0.6684 |
| Copper | 65 | 0.9907 | 0.9846 | 0.9852 | **0.9868** | 0.0034 | 0.34 |
| Lead | 206 | 0.1017 | 0.1021 | 0.113 | **0.1056** | 0.0064 | 6.024 |
| Lead | 207 | 0.0968 | 0.0959 | 0.1082 | **0.1003** | 0.0069 | 6.856 |
| Lead | 208 | 0.0983 | 0.0974 | 0.1044 | **0.1** | 0.0038 | 3.794 |
| Manganese | 55 | 2.695 | 2.633 | 2.649 | **2.659** | 0.0322 | 1.211 |
| Molybdenum | 95 | 55.14 | 55.81 | 55.56 | **55.5** | 0.3392 | 0.6111 |
| Molybdenum | 97 | 55.12 | 55.87 | 55.64 | **55.54** | 0.3856 | 0.6943 |
| Molybdenum | 98 | 55.8 | 56.34 | 56.64 | **56.26** | 0.4288 | 0.7622 |
| Nickel | 60 | 2.423 | 2.296 | 2.35 | **2.357** | 0.0639 | 2.709 |
| Nickel | 62 | 2.925 | 2.919 | 3.147 | **2.997** | 0.1297 | 4.327 |
| Selenium | 77 | 2.903 | 2.858 | 2.594 | **2.785** | 0.1666 | 5.982 |
| Selenium | 78 | 0.1459 | 0.2277 | 0.3259 | **0.2332** | 0.0901 | 38.65 |
| Selenium | 82 | 0.2133 | -0.2796 | 0.0485 | **-0.0059** | 0.2509 | 4240 |
| Silver | 107 | 0.1143 | 0.1153 | 0.1084 | **0.1127** | 0.0037 | 3.324 |
| Silver | 109 | 0.1111 | 0.1078 | 0.1166 | **0.1119** | 0.0045 | 3.984 |
| Thallium | 203 | 0.0697 | 0.0687 | 0.0629 | **0.0671** | 0.0037 | 5.497 |
| Thallium | 205 | 0.0625 | 0.0673 | 0.0596 | **0.0631** | 0.0039 | 6.17 |
| Uranium | 238 | 0.029 | 0.0311 | 0.0289 | **0.0297** | 0.0012 | 4.184 |
| Vanadium | 51 | 0.12 | 0.0698 | 0.0552 | **0.0817** | 0.034 | 41.61 |
| Zinc | 66 | 1.827 | 1.827 | 1.823 | **1.826** | 0.0021 | 0.1157 |
| Zinc | 67 | 5.809 | 5.723 | 5.391 | **5.641** | 0.2204 | 3.908 |
| Zinc | 68 | 1.484 | 1.513 | 1.484 | **1.494** | 0.0169 | 1.129 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.227 | 1.231 | 1.248 | **1.227** | n/a | n/a |
| Scandium | 45 | 1.228 | 1.355 | 1.367 | **1.228** | n/a | n/a |
| Gallium | 71 | 1.277 | 1.362 | 1.385 | **1.277** | n/a | n/a |
| Rhodium | 103 | 1.27 | 1.332 | 1.335 | **1.27** | n/a | n/a |
| Indium | 115 | 1.25 | 1.267 | 1.301 | **1.25** | n/a | n/a |
| Lutetium | 175 | 1.271 | 1.267 | 1.287 | **1.271** | n/a | n/a |
| Thorium | 232 | 1.107 | 1.152 | 1.184 | **1.107** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | ICSAB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:14 | | | | | |
| Aluminum | 27 | 22480 | 21820 | 22050 | **22120** | 333.1 | 1.506 |
| Antimony | 121 | 0.0442 | 0.0447 | 0.0423 | **0.0437** | 0.0013 | 2.94 |
| Antimony | 123 | 0.0477 | 0.0492 | 0.0493 | **0.0487** | 0.0009 | 1.889 |
| Arsenic | 75 | 26.49 | 27.08 | 26.86 | **26.81** | 0.2979 | 1.111 |
| Barium | 135 | 0.2771 | 0.3184 | 0.3121 | **0.3025** | 0.0222 | 7.351 |
| Barium | 137 | 0.2989 | 0.2969 | 0.2825 | **0.2928** | 0.0089 | 3.047 |
| Barium | 138 | 0.3065 | 0.2991 | 0.2992 | **0.3016** | 0.0042 | 1.406 |
| Beryllium | 9 | 0.0138 | 0.0111 | 0.0149 | **0.0133** | 0.0019 | 14.7 |
| Cadmium | 111 | 26.17 | 26.48 | 26.09 | **26.25** | 0.2048 | 0.7803 |
| Cadmium | 114 | 25.87 | 26.11 | 25.93 | **25.97** | 0.1226 | 0.4719 |
| Chromium | 52 | 55.09 | 53.31 | 53.47 | **53.95** | 0.9827 | 1.821 |
| Chromium | 53 | 56.66 | 54.88 | 55.02 | **55.52** | 0.9868 | 1.777 |
| Cobalt | 59 | 54.25 | 54 | 54.37 | **54.21** | 0.1906 | 0.3516 |
| Copper | 63 | 50.84 | 52.07 | 51.13 | **51.34** | 0.641 | 1.249 |
| Copper | 65 | 50.44 | 50 | 49.28 | **49.91** | 0.5835 | 1.169 |
| Lead | 206 | 0.0618 | 0.0535 | 0.0559 | **0.0571** | 0.0042 | 7.426 |
| Lead | 207 | 0.0584 | 0.0482 | 0.0562 | **0.0543** | 0.0054 | 9.862 |
| Lead | 208 | 0.0593 | 0.0544 | 0.0564 | **0.0567** | 0.0025 | 4.375 |
| Manganese | 55 | 50.66 | 54.57 | 55.5 | **53.58** | 2.57 | 4.797 |
| Molybdenum | 95 | 54.06 | 55.42 | 55.36 | **54.95** | 0.767 | 1.396 |
| Molybdenum | 97 | 54.6 | 55.13 | 54.68 | **54.8** | 0.2882 | 0.5259 |
| Molybdenum | 98 | 54.59 | 55.29 | 55.27 | **55.05** | 0.395 | 0.7176 |
| Nickel | 60 | 53.23 | 53.21 | 51.58 | **52.67** | 0.9448 | 1.794 |
| Nickel | 62 | 52.93 | 53.82 | 53.94 | **53.56** | 0.552 | 1.031 |
| Selenium | 77 | 28.94 | 28.9 | 27.5 | **28.45** | 0.8191 | 2.879 |
| Selenium | 78 | 26.48 | 26.16 | 26.37 | **26.34** | 0.1613 | 0.6126 |
| Selenium | 82 | 25.05 | 26.42 | 25.4 | **25.62** | 0.7155 | 2.792 |
| Silver | 107 | 13.62 | 13.61 | 13.71 | **13.64** | 0.0574 | 0.4206 |
| Silver | 109 | 13.68 | 13.64 | 13.55 | **13.62** | 0.0635 | 0.4662 |
| Thallium | 203 | 0.0321 | 0.0277 | 0.0328 | **0.0309** | 0.0028 | 9.057 |
| Thallium | 205 | 0.037 | 0.0348 | 0.0354 | **0.0357** | 0.0011 | 3.088 |
| Uranium | 238 | 0.003 | 0.0024 | 0.0016 | **0.0023** | 0.0007 | 29.24 |
| Vanadium | 51 | 54.39 | 54.89 | 54.3 | **54.53** | 0.3207 | 0.5881 |
| Zinc | 66 | 25.34 | 25.25 | 24.86 | **25.15** | 0.2568 | 1.021 |
| Zinc | 67 | 27.63 | 28.04 | 28.33 | **28** | 0.3534 | 1.262 |
| Zinc | 68 | 23.65 | 24.34 | 23.95 | **23.98** | 0.345 | 1.438 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.205 | 1.195 | 1.188 | **1.205** | n/a | n/a |
| Scandium | 45 | 1.291 | 1.345 | 1.364 | **1.291** | n/a | n/a |
| Gallium | 71 | 1.181 | 1.288 | 1.297 | **1.181** | n/a | n/a |
| Rhodium | 103 | 1.225 | 1.277 | 1.288 | **1.225** | n/a | n/a |
| Indium | 115 | 1.21 | 1.24 | 1.233 | **1.21** | n/a | n/a |
| Lutetium | 175 | 1.239 | 1.235 | 1.243 | **1.239** | n/a | n/a |
| Thorium | 232 | 1.189 | 1.182 | 1.208 | **1.189** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCV2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:21 | | | | | |
| Aluminum | 27 | 24.75 | 24.83 | 25.22 | **24.93** | 0.2554 | 1.024 |
| Antimony | 121 | 24.47 | 25 | 24.66 | **24.71** | 0.2724 | 1.103 |
| Antimony | 123 | 24.75 | 25.07 | 24.94 | **24.92** | 0.1624 | 0.6517 |
| Arsenic | 75 | 24.87 | 24.87 | 24.65 | **24.8** | 0.1285 | 0.5183 |
| Barium | 135 | 24.45 | 24.49 | 24.71 | **24.55** | 0.1363 | 0.5552 |
| Barium | 137 | 24.56 | 24.58 | 24.5 | **24.55** | 0.044 | 0.1793 |
| Barium | 138 | 24.92 | 24.72 | 24.84 | **24.83** | 0.0992 | 0.3995 |
| Beryllium | 9 | 25.17 | 25.97 | 25.82 | **25.65** | 0.4273 | 1.666 |
| Cadmium | 111 | 24.6 | 25.08 | 25.01 | **24.9** | 0.2587 | 1.039 |
| Cadmium | 114 | 25.07 | 25.13 | 24.88 | **25.03** | 0.1343 | 0.5368 |
| Chromium | 52 | 24.75 | 25.2 | 24.75 | **24.9** | 0.2574 | 1.034 |
| Chromium | 53 | 24.52 | 25.12 | 24.62 | **24.75** | 0.3236 | 1.307 |
| Cobalt | 59 | 25.05 | 25.12 | 24.8 | **24.99** | 0.1661 | 0.6647 |
| Copper | 63 | 25.21 | 25.3 | 25.16 | **25.23** | 0.0745 | 0.2953 |
| Copper | 65 | 24.79 | 25.21 | 24.86 | **24.95** | 0.2254 | 0.9033 |
| Lead | 206 | 24.67 | 24.54 | 25.01 | **24.74** | 0.2422 | 0.979 |
| Lead | 207 | 24.94 | 24.83 | 24.92 | **24.9** | 0.0601 | 0.2415 |
| Lead | 208 | 24.59 | 24.64 | 24.74 | **24.66** | 0.0728 | 0.2953 |
| Manganese | 55 | 25.09 | 25.11 | 24.72 | **24.97** | 0.2227 | 0.892 |
| Molybdenum | 95 | 24.67 | 24.77 | 24.74 | **24.73** | 0.0504 | 0.2036 |
| Molybdenum | 97 | 24.87 | 24.38 | 24.58 | **24.61** | 0.2428 | 0.9867 |
| Molybdenum | 98 | 24.68 | 24.64 | 24.7 | **24.67** | 0.0295 | 0.1194 |
| Nickel | 60 | 25.63 | 25.13 | 25.38 | **25.38** | 0.2523 | 0.9942 |
| Nickel | 62 | 24.79 | 23.67 | 25 | **24.48** | 0.7156 | 2.923 |
| Selenium | 77 | 25.07 | 24.34 | 25.72 | **25.04** | 0.6894 | 2.753 |
| Selenium | 78 | 25.11 | 24.21 | 24.5 | **24.61** | 0.4572 | 1.858 |
| Selenium | 82 | 24.75 | 25.12 | 25.51 | **25.12** | 0.3794 | 1.51 |
| Silver | 107 | 24.7 | 24.63 | 24.73 | **24.69** | 0.0527 | 0.2133 |
| Silver | 109 | 25.05 | 24.76 | 24.76 | **24.86** | 0.1651 | 0.6642 |
| Thallium | 203 | 24.89 | 25.25 | 25.11 | **25.08** | 0.1842 | 0.7343 |
| Thallium | 205 | 24.88 | 24.87 | 25.11 | **24.95** | 0.1339 | 0.5365 |
| Uranium | 238 | 25.23 | 25.38 | 25.49 | **25.37** | 0.1293 | 0.5095 |
| Vanadium | 51 | 25.36 | 25.04 | 24.97 | **25.12** | 0.2075 | 0.8261 |
| Zinc | 66 | 25.02 | 24.65 | 24.26 | **24.64** | 0.3805 | 1.544 |
| Zinc | 67 | 24.54 | 24.82 | 24.55 | **24.64** | 0.1557 | 0.6318 |
| Zinc | 68 | 25.44 | 25.22 | 25.09 | **25.25** | 0.177 | 0.7012 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.976 | 1.011 | 1.006 | **0.976** | n/a | n/a |
| Scandium | 45 | 0.974 | 1.047 | 1.065 | **0.974** | n/a | n/a |
| Gallium | 71 | 0.965 | 1.039 | 1.046 | **0.965** | n/a | n/a |
| Rhodium | 103 | 0.983 | 1.011 | 1.022 | **0.983** | n/a | n/a |
| Indium | 115 | 0.988 | 1.014 | 1.015 | **0.988** | n/a | n/a |
| Lutetium | 175 | 1.022 | 1.014 | 1.012 | **1.022** | n/a | n/a |
| Thorium | 232 | 1.029 | 1.012 | 1.027 | **1.029** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCB2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:33 | | | | | |
| Aluminum | 27 | 0.0451 | 0.0475 | 0.049 | **0.0472** | 0.002 | 4.214 |
| Antimony | 121 | 0.0184 | 0.0175 | 0.0099 | **0.0153** | 0.0047 | 30.61 |
| Antimony | 123 | 0.0243 | 0.0217 | 0.0126 | **0.0195** | 0.0061 | 31.46 |
| Arsenic | 75 | 0.0231 | -0.0428 | 0.0193 | **-0.0001** | 0.037 | 31020 |
| Barium | 135 | 0.0027 | 0.0028 | 0.0006 | **0.002** | 0.0012 | 61.5 |
| Barium | 137 | 0.0016 | 0.005 | 0.0004 | **0.0024** | 0.0024 | 101.1 |
| Barium | 138 | 0.0029 | 0.0045 | 0.0018 | **0.0031** | 0.0014 | 43.77 |
| Beryllium | 9 | 0.0029 | 0.0041 | -0.0007 | **0.0021** | 0.0025 | 118.4 |
| Cadmium | 111 | -0.0002 | 0.001 | -0.001 | **0** | 0.001 | 2092 |
| Cadmium | 114 | 0.0021 | -0.0015 | -0.0013 | **-0.0002** | 0.002 | 1027 |
| Chromium | 52 | 0.0069 | -0.0059 | 0.0251 | **0.0087** | 0.0156 | 179 |
| Chromium | 53 | 0.1794 | 0.2936 | 0.0674 | **0.1801** | 0.1131 | 62.77 |
| Cobalt | 59 | 0.0008 | -0.0003 | 0.0021 | **0.0009** | 0.0012 | 134.3 |
| Copper | 63 | -0.0019 | -0.0062 | 0.0057 | **-0.0008** | 0.006 | 776.4 |
| Copper | 65 | 0.0058 | -0.0029 | 0.0004 | **0.0011** | 0.0044 | 392.6 |
| Lead | 206 | 0.0001 | 0.0049 | 0.0016 | **0.0022** | 0.0024 | 110.9 |
| Lead | 207 | 0.0022 | 0.0024 | 0.0018 | **0.0021** | 0.0003 | 12.31 |
| Lead | 208 | 0.0014 | 0.0021 | 0.001 | **0.0015** | 0.0006 | 36.88 |
| Manganese | 55 | -0.002 | 0.0001 | -0.0004 | **-0.0008** | 0.0011 | 143.9 |
| Molybdenum | 95 | 0.0101 | 0.0091 | 0.005 | **0.0081** | 0.0027 | 33.61 |
| Molybdenum | 97 | 0.0094 | 0.0124 | 0.0102 | **0.0107** | 0.0016 | 14.55 |
| Molybdenum | 98 | 0.0082 | 0.0125 | 0.008 | **0.0095** | 0.0025 | 26.57 |
| Nickel | 60 | -0.0003 | 0.003 | 0.0123 | **0.005** | 0.0065 | 130.6 |
| Nickel | 62 | 0.0768 | 0.0013 | 0.0786 | **0.0522** | 0.0442 | 84.53 |
| Selenium | 77 | 0.0356 | 0.1254 | -0.0896 | **0.0238** | 0.108 | 453.5 |
| Selenium | 78 | -0.2798 | -0.1768 | -0.3116 | **-0.2561** | 0.0705 | 27.53 |
| Selenium | 82 | 0.0791 | -0.0798 | -0.0179 | **-0.0062** | 0.0801 | 1292 |
| Silver | 107 | 0.0023 | 0.0016 | 0.0024 | **0.0021** | 0.0005 | 22.72 |
| Silver | 109 | 0.0016 | 0.0003 | 0.0014 | **0.0011** | 0.0007 | 63.44 |
| Thallium | 203 | 0.0031 | 0.0002 | 0.0011 | **0.0015** | 0.0014 | 98.37 |
| Thallium | 205 | 0.0024 | 0.002 | 0.0011 | **0.0018** | 0.0007 | 38.24 |
| Uranium | 238 | -0.0025 | -0.003 | -0.0034 | **-0.003** | 0.0005 | 15.45 |
| Vanadium | 51 | -0.0079 | -0.0645 | 0.0151 | **-0.0191** | 0.0409 | 214.1 |
| Zinc | 66 | -0.0063 | 0.0053 | -0.0031 | **-0.0014** | 0.006 | 430.9 |
| Zinc | 67 | 0.0198 | 0.0134 | 0.0162 | **0.0165** | 0.0032 | 19.52 |
| Zinc | 68 | 0.0083 | 0.0018 | 0.0222 | **0.0108** | 0.0104 | 96.6 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.078 | 1.078 | 1.043 | **1.078** | n/a | n/a |
| Scandium | 45 | 0.982 | 1.056 | 1.078 | **0.982** | n/a | n/a |
| Gallium | 71 | 0.975 | 1.056 | 1.08 | **0.975** | n/a | n/a |
| Rhodium | 103 | 1.001 | 1.052 | 1.037 | **1.001** | n/a | n/a |
| Indium | 115 | 1.034 | 1.047 | 1.044 | **1.034** | n/a | n/a |
| Lutetium | 175 | 1.1 | 1.091 | 1.084 | **1.1** | n/a | n/a |
| Thorium | 232 | 1.064 | 1.048 | 1.052 | **1.064** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-MB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:37 | | | | | |
| Aluminum | 27 | 0.316 | 0.3302 | 0.3469 | **0.3311** | 0.0155 | 4.669 |
| Antimony | 121 | 0.008 | 0.005 | 0.0068 | **0.0066** | 0.0015 | 22.82 |
| Antimony | 123 | 0.0058 | 0.0116 | 0.0065 | **0.008** | 0.0032 | 39.94 |
| Arsenic | 75 | 0.0348 | 0.0846 | -0.0096 | **0.0366** | 0.0471 | 128.7 |
| Barium | 135 | 0.0123 | 0.0107 | 0.0064 | **0.0098** | 0.003 | 30.79 |
| Barium | 137 | 0.0101 | 0.0079 | 0.0084 | **0.0088** | 0.0011 | 13 |
| Barium | 138 | 0.0117 | 0.0131 | 0.013 | **0.0126** | 0.0008 | 6.359 |
| Beryllium | 9 | 0.002 | 0.0026 | 0.0009 | **0.0018** | 0.0009 | 48.14 |
| Cadmium | 111 | 0.0082 | 0.0026 | 0.0058 | **0.0055** | 0.0028 | 50.34 |
| Cadmium | 114 | 0.0068 | 0.0035 | 0.002 | **0.0041** | 0.0025 | 60.09 |
| Chromium | 52 | 0.0348 | 0.056 | 0.0224 | **0.0377** | 0.017 | 45.11 |
| Chromium | 53 | 0.0708 | 0.0781 | 0.0802 | **0.0764** | 0.005 | 6.495 |
| Cobalt | 59 | 0.0026 | 0.0037 | 0.0022 | **0.0028** | 0.0008 | 27.95 |
| Copper | 63 | 0.0039 | 0.0021 | 0.0105 | **0.0055** | 0.0044 | 80.48 |
| Copper | 65 | 0.012 | 0.0115 | 0.0115 | **0.0117** | 0.0003 | 2.669 |
| Lead | 206 | 0.0086 | 0.006 | 0.0049 | **0.0065** | 0.0019 | 28.99 |
| Lead | 207 | 0.0048 | 0.0044 | 0.0047 | **0.0046** | 0.0002 | 4.461 |
| Lead | 208 | 0.0064 | 0.0043 | 0.0045 | **0.0051** | 0.0012 | 23.4 |
| Manganese | 55 | 0.0186 | 0.0178 | 0.0124 | **0.0163** | 0.0034 | 20.7 |
| Molybdenum | 95 | 0.0042 | 0.0016 | 0.0048 | **0.0035** | 0.0017 | 47.43 |
| Molybdenum | 97 | -0.0013 | 0.0055 | 0.0011 | **0.0018** | 0.0034 | 193.2 |
| Molybdenum | 98 | 0.0065 | 0.0042 | 0.0055 | **0.0054** | 0.0012 | 21.28 |
| Nickel | 60 | 0.014 | -0.0049 | -0.0134 | **-0.0015** | 0.014 | 962.6 |
| Nickel | 62 | -0.0142 | 0.1384 | 0.0881 | **0.0708** | 0.0777 | 109.9 |
| Selenium | 77 | -0.0516 | 0.0644 | 0.0143 | **0.009** | 0.0581 | 643.6 |
| Selenium | 78 | -0.3305 | -0.3466 | -0.5139 | **-0.397** | 0.1016 | 25.58 |
| Selenium | 82 | 0.0326 | 0.2835 | -0.1131 | **0.0677** | 0.2006 | 296.6 |
| Silver | 107 | 0.0004 | -0.0001 | 0.0002 | **0.0002** | 0.0003 | 158.6 |
| Silver | 109 | 0.0001 | 0.0005 | -0.0001 | **0.0002** | 0.0003 | 168.8 |
| Thallium | 203 | 0.0032 | 0.0035 | 0.0035 | **0.0034** | 0.0002 | 4.985 |
| Thallium | 205 | 0.0037 | 0.0046 | 0.0035 | **0.004** | 0.0006 | 14.39 |
| Uranium | 238 | -0.0037 | -0.004 | -0.0034 | **-0.0037** | 0.0003 | 8.319 |
| Vanadium | 51 | 0.0183 | 0.0135 | 0.0063 | **0.0127** | 0.006 | 47.55 |
| Zinc | 66 | 0.1321 | 0.1148 | 0.1343 | **0.1271** | 0.0107 | 8.406 |
| Zinc | 67 | 0.114 | 0.0938 | 0.1175 | **0.1084** | 0.0128 | 11.78 |
| Zinc | 68 | 0.1323 | 0.1047 | 0.1113 | **0.1161** | 0.0144 | 12.4 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.031 | 1.03 | 1.021 | **1.031** | n/a | n/a |
| Scandium | 45 | 1.041 | 1.08 | 1.074 | **1.041** | n/a | n/a |
| Gallium | 71 | 1.033 | 1.067 | 1.085 | **1.033** | n/a | n/a |
| Rhodium | 103 | 1.03 | 1.049 | 1.047 | **1.03** | n/a | n/a |
| Indium | 115 | 1.058 | 1.059 | 1.064 | **1.058** | n/a | n/a |
| Lutetium | 175 | 1.089 | 1.07 | 1.071 | **1.089** | n/a | n/a |
| Thorium | 232 | 1.075 | 1.068 | 1.076 | **1.075** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-013 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:41 | | | | | |
| Aluminum | 27 | 5.879 | 5.753 | 5.535 | **5.723** | 0.174 | 3.041 |
| Antimony | 121 | 0.0154 | 0.012 | 0.0121 | **0.0132** | 0.0019 | 14.76 |
| Antimony | 123 | 0.0169 | 0.0192 | 0.0152 | **0.0171** | 0.002 | 11.67 |
| Arsenic | 75 | -0.0019 | 0.0108 | 0.1143 | **0.0411** | 0.0637 | 155.2 |
| Barium | 135 | 0.1029 | 0.094 | 0.0819 | **0.093** | 0.0105 | 11.32 |
| Barium | 137 | 0.103 | 0.101 | 0.1044 | **0.1028** | 0.0017 | 1.648 |
| Barium | 138 | 0.1033 | 0.0994 | 0.1042 | **0.1023** | 0.0026 | 2.526 |
| Beryllium | 9 | -0.0024 | 0.0008 | -0.0011 | **-0.0009** | 0.0016 | 177.1 |
| Cadmium | 111 | 0.006 | 0.0036 | 0.0015 | **0.0037** | 0.0023 | 60.58 |
| Cadmium | 114 | 0.0069 | 0.0052 | 0.0049 | **0.0057** | 0.0011 | 18.7 |
| Chromium | 52 | 0.091 | 0.1138 | 0.0925 | **0.0991** | 0.0128 | 12.89 |
| Chromium | 53 | 0.0707 | 0.0717 | 0.0763 | **0.0729** | 0.003 | 4.122 |
| Cobalt | 59 | 0.0065 | 0.005 | 0.0054 | **0.0056** | 0.0008 | 14.32 |
| Copper | 63 | 0.7971 | 0.8073 | 0.8022 | **0.8022** | 0.0051 | 0.6356 |
| Copper | 65 | 0.8002 | 0.788 | 0.8164 | **0.8015** | 0.0143 | 1.778 |
| Lead | 206 | 0.084 | 0.0873 | 0.0878 | **0.0864** | 0.0021 | 2.414 |
| Lead | 207 | 0.0872 | 0.0843 | 0.0864 | **0.086** | 0.0015 | 1.706 |
| Lead | 208 | 0.0861 | 0.0866 | 0.0878 | **0.0868** | 0.0009 | 0.9857 |
| Manganese | 55 | 0.4565 | 0.4459 | 0.4476 | **0.45** | 0.0057 | 1.272 |
| Molybdenum | 95 | 0.2175 | 0.2344 | 0.2373 | **0.2297** | 0.0107 | 4.674 |
| Molybdenum | 97 | 0.2276 | 0.2455 | 0.2421 | **0.2384** | 0.0095 | 4.001 |
| Molybdenum | 98 | 0.2461 | 0.2479 | 0.2355 | **0.2432** | 0.0067 | 2.753 |
| Nickel | 60 | 0.0574 | 0.0651 | 0.0514 | **0.058** | 0.0069 | 11.83 |
| Nickel | 62 | 0.0791 | 0.089 | 0.165 | **0.111** | 0.047 | 42.34 |
| Selenium | 77 | -0.0904 | 0.0915 | 0.0415 | **0.0142** | 0.094 | 661.5 |
| Selenium | 78 | -0.2596 | -0.1924 | -0.174 | **-0.2087** | 0.045 | 21.59 |
| Selenium | 82 | -0.1846 | 0.0516 | 0.4412 | **0.1027** | 0.316 | 307.6 |
| Silver | 107 | -0.0001 | -0.0001 | 0.0004 | **0** | 0.0003 | 619.6 |
| Silver | 109 | 0.001 | -0.0005 | 0.0003 | **0.0003** | 0.0008 | 270.2 |
| Thallium | 203 | 0.0033 | 0.0023 | 0.0037 | **0.0031** | 0.0007 | 23.15 |
| Thallium | 205 | 0.0028 | 0.0029 | 0.0026 | **0.0028** | 0.0001 | 5.313 |
| Uranium | 238 | -0.0024 | -0.0015 | -0.003 | **-0.0023** | 0.0008 | 33.02 |
| Vanadium | 51 | 0.0408 | 0.0444 | 0.0378 | **0.041** | 0.0033 | 8.114 |
| Zinc | 66 | 3.052 | 3.114 | 3.134 | **3.1** | 0.0428 | 1.38 |
| Zinc | 67 | 2.997 | 2.855 | 2.886 | **2.913** | 0.0749 | 2.572 |
| Zinc | 68 | 3.051 | 3.064 | 3.021 | **3.045** | 0.0221 | 0.7256 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.031 | 1.004 | 0.957 | **1.031** | n/a | n/a |
| Scandium | 45 | 1.02 | 1.088 | 1.093 | **1.02** | n/a | n/a |
| Gallium | 71 | 1.018 | 1.069 | 1.073 | **1.018** | n/a | n/a |
| Rhodium | 103 | 1.025 | 1.055 | 1.042 | **1.025** | n/a | n/a |
| Indium | 115 | 1.045 | 1.05 | 1.045 | **1.045** | n/a | n/a |
| Lutetium | 175 | 1.073 | 1.055 | 1.066 | **1.073** | n/a | n/a |
| Thorium | 232 | 1.057 | 1.069 | 1.057 | **1.057** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-012 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:46 | | | | | |
| Aluminum | 27 | 9.129 | 8.89 | 9.026 | **9.015** | 0.1198 | 1.329 |
| Antimony | 121 | 0.0035 | 0.004 | 0.0024 | **0.0033** | 0.0008 | 24.25 |
| Antimony | 123 | 0.002 | 0.0056 | 0.0035 | **0.0037** | 0.0018 | 48.19 |
| Arsenic | 75 | 0.0604 | -0.0291 | 0.0274 | **0.0196** | 0.0453 | 231.1 |
| Barium | 135 | 17 | 17.15 | 17.17 | **17.11** | 0.0933 | 0.5452 |
| Barium | 137 | 17.28 | 17.18 | 17.28 | **17.25** | 0.0562 | 0.3259 |
| Barium | 138 | 17.43 | 17.56 | 17.31 | **17.43** | 0.1231 | 0.7061 |
| Beryllium | 9 | 0.0027 | 0.0006 | 0.001 | **0.0014** | 0.0011 | 77.83 |
| Cadmium | 111 | 0.0163 | 0.0184 | 0.0169 | **0.0172** | 0.0011 | 6.279 |
| Cadmium | 114 | 0.0245 | 0.0217 | 0.0209 | **0.0224** | 0.0019 | 8.428 |
| Chromium | 52 | 0.1877 | 0.2037 | 0.1348 | **0.1754** | 0.036 | 20.55 |
| Chromium | 53 | 0.1555 | 0.132 | 0.0967 | **0.1281** | 0.0296 | 23.12 |
| Cobalt | 59 | 0.0105 | 0.0122 | 0.0108 | **0.0112** | 0.0009 | 8.215 |
| Copper | 63 | 1.505 | 1.543 | 1.511 | **1.52** | 0.0207 | 1.362 |
| Copper | 65 | 1.532 | 1.557 | 1.496 | **1.528** | 0.0308 | 2.018 |
| Lead | 206 | 1.781 | 1.739 | 1.776 | **1.765** | 0.0233 | 1.321 |
| Lead | 207 | 1.678 | 1.659 | 1.672 | **1.669** | 0.0096 | 0.578 |
| Lead | 208 | 1.705 | 1.686 | 1.711 | **1.701** | 0.0129 | 0.7565 |
| Manganese | 55 | 1.409 | 1.355 | 1.359 | **1.374** | 0.0299 | 2.177 |
| Molybdenum | 95 | 0.0233 | 0.0226 | 0.0229 | **0.0229** | 0.0004 | 1.587 |
| Molybdenum | 97 | 0.0346 | 0.0157 | 0.0278 | **0.026** | 0.0096 | 36.77 |
| Molybdenum | 98 | 0.0249 | 0.0237 | 0.0281 | **0.0256** | 0.0023 | 9.067 |
| Nickel | 60 | 0.2592 | 0.2553 | 0.2593 | **0.2579** | 0.0023 | 0.8888 |
| Nickel | 62 | 0.2126 | 0.1934 | 0.2825 | **0.2295** | 0.0469 | 20.42 |
| Selenium | 77 | -0.0468 | 0.0078 | 0.0421 | **0.001** | 0.0448 | 4392 |
| Selenium | 78 | -0.1114 | -0.0761 | -0.4262 | **-0.2046** | 0.1927 | 94.23 |
| Selenium | 82 | 0.0925 | -0.2187 | 0.045 | **-0.0271** | 0.1676 | 619.3 |
| Silver | 107 | 0.0039 | 0.004 | 0.0037 | **0.0039** | 0.0002 | 3.936 |
| Silver | 109 | 0.0023 | 0.0024 | 0.0029 | **0.0025** | 0.0003 | 13.64 |
| Thallium | 203 | 0.0029 | 0.0033 | 0.001 | **0.0024** | 0.0012 | 51.57 |
| Thallium | 205 | 0.002 | 0.0019 | 0.0033 | **0.0024** | 0.0007 | 31.22 |
| Uranium | 238 | 0.0001 | 0.0008 | 0.0003 | **0.0004** | 0.0003 | 79.78 |
| Vanadium | 51 | 0.0807 | 0.0834 | 0.0772 | **0.0804** | 0.0031 | 3.871 |
| Zinc | 66 | 3.419 | 3.361 | 3.35 | **3.377** | 0.0369 | 1.092 |
| Zinc | 67 | 4.155 | 4.258 | 4.212 | **4.209** | 0.0516 | 1.226 |
| Zinc | 68 | 4.301 | 3.911 | 4.138 | **4.117** | 0.1959 | 4.758 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.982 | 0.973 | 0.963 | **0.982** | n/a | n/a |
| Scandium | 45 | 1.01 | 1.065 | 1.077 | **1.01** | n/a | n/a |
| Gallium | 71 | 1.011 | 1.039 | 1.06 | **1.011** | n/a | n/a |
| Rhodium | 103 | 1.017 | 1.032 | 1.026 | **1.017** | n/a | n/a |
| Indium | 115 | 1.027 | 1.026 | 1.029 | **1.027** | n/a | n/a |
| Lutetium | 175 | 1.045 | 1.034 | 1.022 | **1.045** | n/a | n/a |
| Thorium | 232 | 1.052 | 1.024 | 1.036 | **1.052** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-012D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:51 | | | | | |
| Aluminum | 27 | 9.626 | 9.294 | 9.393 | **9.438** | 0.1703 | 1.804 |
| Antimony | 121 | 0.0007 | 0.0019 | 0.0011 | **0.0012** | 0.0006 | 47.28 |
| Antimony | 123 | 0.0052 | -0.0018 | 0.0011 | **0.0015** | 0.0035 | 231.1 |
| Arsenic | 75 | 0.0542 | -0.0266 | -0.0895 | **-0.0206** | 0.072 | 349.2 |
| Barium | 135 | 17.3 | 17.23 | 16.71 | **17.08** | 0.3186 | 1.866 |
| Barium | 137 | 17.45 | 17.22 | 17.07 | **17.24** | 0.1902 | 1.103 |
| Barium | 138 | 17.69 | 17.59 | 17.46 | **17.58** | 0.1172 | 0.6664 |
| Beryllium | 9 | 0.0049 | 0.0013 | 0.0015 | **0.0026** | 0.002 | 77.79 |
| Cadmium | 111 | 0.0181 | 0.0194 | 0.028 | **0.0218** | 0.0053 | 24.52 |
| Cadmium | 114 | 0.0167 | 0.023 | 0.0243 | **0.0213** | 0.004 | 18.93 |
| Chromium | 52 | 0.192 | 0.1302 | 0.1438 | **0.1553** | 0.0325 | 20.91 |
| Chromium | 53 | 0.1312 | 0.107 | 0.1188 | **0.119** | 0.0121 | 10.18 |
| Cobalt | 59 | 0.0106 | 0.0121 | 0.0121 | **0.0116** | 0.0009 | 7.604 |
| Copper | 63 | 1.574 | 1.57 | 1.523 | **1.556** | 0.0284 | 1.825 |
| Copper | 65 | 1.522 | 1.526 | 1.53 | **1.526** | 0.0037 | 0.2415 |
| Lead | 206 | 1.751 | 1.766 | 1.784 | **1.767** | 0.0169 | 0.9579 |
| Lead | 207 | 1.685 | 1.729 | 1.692 | **1.702** | 0.0234 | 1.375 |
| Lead | 208 | 1.714 | 1.735 | 1.716 | **1.722** | 0.0116 | 0.6743 |
| Manganese | 55 | 1.344 | 1.364 | 1.31 | **1.339** | 0.0275 | 2.05 |
| Molybdenum | 95 | 0.0279 | 0.0239 | 0.0246 | **0.0255** | 0.0022 | 8.474 |
| Molybdenum | 97 | 0.031 | 0.0186 | 0.0158 | **0.0218** | 0.0081 | 37.24 |
| Molybdenum | 98 | 0.0224 | 0.0229 | 0.0308 | **0.0253** | 0.0047 | 18.54 |
| Nickel | 60 | 0.2285 | 0.2386 | 0.2335 | **0.2335** | 0.0051 | 2.174 |
| Nickel | 62 | 0.2349 | 0.2685 | 0.267 | **0.2568** | 0.019 | 7.398 |
| Selenium | 77 | -0.0922 | -0.0367 | -0.0451 | **-0.058** | 0.0299 | 51.6 |
| Selenium | 78 | -0.3609 | -0.2548 | -0.2393 | **-0.285** | 0.0662 | 23.22 |
| Selenium | 82 | 0.0267 | -0.205 | -0.4613 | **-0.2132** | 0.2441 | 114.5 |
| Silver | 107 | 0.0079 | 0.0095 | 0.0111 | **0.0095** | 0.0016 | 17.11 |
| Silver | 109 | 0.0061 | 0.0065 | 0.0065 | **0.0064** | 0.0002 | 3.74 |
| Thallium | 203 | 0.0025 | 0.0033 | 0.0031 | **0.003** | 0.0004 | 14.01 |
| Thallium | 205 | 0.0026 | 0.0032 | 0.0023 | **0.0027** | 0.0004 | 16.14 |
| Uranium | 238 | 0.0016 | -0.0008 | 0.0001 | **0.0003** | 0.0012 | 379.5 |
| Vanadium | 51 | 0.0789 | 0.0614 | 0.063 | **0.0678** | 0.0096 | 14.21 |
| Zinc | 66 | 3.09 | 2.967 | 3.089 | **3.049** | 0.0704 | 2.309 |
| Zinc | 67 | 3.738 | 4.003 | 3.855 | **3.865** | 0.1328 | 3.435 |
| Zinc | 68 | 3.702 | 3.71 | 3.821 | **3.744** | 0.0665 | 1.777 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.047 | 1.008 | 1.04 | **1.047** | n/a | n/a |
| Scandium | 45 | 1.029 | 1.065 | 1.069 | **1.029** | n/a | n/a |
| Gallium | 71 | 1.015 | 1.065 | 1.085 | **1.015** | n/a | n/a |
| Rhodium | 103 | 1.021 | 1.043 | 1.042 | **1.021** | n/a | n/a |
| Indium | 115 | 1.045 | 1.049 | 1.045 | **1.045** | n/a | n/a |
| Lutetium | 175 | 1.068 | 1.067 | 1.061 | **1.068** | n/a | n/a |
| Thorium | 232 | 1.081 | 1.05 | 1.059 | **1.081** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-012 1/5L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 9:55 | | | | | |
| Aluminum | 27 | 2.193 | 2.03 | 2.229 | **2.151** | 0.1061 | 4.934 |
| Antimony | 121 | -0.0083 | -0.0078 | -0.0093 | **-0.0085** | 0.0008 | 9.188 |
| Antimony | 123 | -0.0049 | -0.0059 | -0.0052 | **-0.0053** | 0.0005 | 10.18 |
| Arsenic | 75 | -0.0429 | -0.0467 | 0.0156 | **-0.0247** | 0.0349 | 141.7 |
| Barium | 135 | 3.323 | 3.455 | 3.284 | **3.354** | 0.0892 | 2.66 |
| Barium | 137 | 3.285 | 3.343 | 3.42 | **3.349** | 0.0678 | 2.023 |
| Barium | 138 | 3.347 | 3.377 | 3.333 | **3.352** | 0.0224 | 0.6694 |
| Beryllium | 9 | 0.0019 | -0.0008 | 0.0024 | **0.0012** | 0.0017 | 145.3 |
| Cadmium | 111 | 0.0051 | 0.0071 | 0.0028 | **0.005** | 0.0022 | 43.08 |
| Cadmium | 114 | 0.0032 | 0.0056 | 0.0028 | **0.0039** | 0.0015 | 39.11 |
| Chromium | 52 | 0.0499 | 0.0108 | 0.0778 | **0.0462** | 0.0336 | 72.9 |
| Chromium | 53 | 0.067 | 0.0331 | 0.0182 | **0.0394** | 0.025 | 63.45 |
| Cobalt | 59 | 0.0026 | 0.0033 | 0.0049 | **0.0036** | 0.0012 | 32.81 |
| Copper | 63 | 0.3074 | 0.2927 | 0.2958 | **0.2986** | 0.0077 | 2.587 |
| Copper | 65 | 0.3259 | 0.3157 | 0.3038 | **0.3151** | 0.0111 | 3.519 |
| Lead | 206 | 0.3568 | 0.352 | 0.3455 | **0.3515** | 0.0057 | 1.61 |
| Lead | 207 | 0.3517 | 0.3417 | 0.3421 | **0.3452** | 0.0057 | 1.64 |
| Lead | 208 | 0.3506 | 0.3495 | 0.338 | **0.346** | 0.007 | 2.02 |
| Manganese | 55 | 0.2756 | 0.2741 | 0.2678 | **0.2725** | 0.0042 | 1.532 |
| Molybdenum | 95 | 0.008 | 0.0078 | 0.0087 | **0.0082** | 0.0005 | 5.613 |
| Molybdenum | 97 | 0.0038 | 0.007 | 0.0054 | **0.0054** | 0.0016 | 29.46 |
| Molybdenum | 98 | 0.0085 | 0.0067 | 0.0076 | **0.0076** | 0.0009 | 11.78 |
| Nickel | 60 | 0.0651 | 0.0592 | 0.0808 | **0.0684** | 0.0112 | 16.32 |
| Nickel | 62 | 0.0753 | 0.0773 | 0.0675 | **0.0734** | 0.0052 | 7.028 |
| Selenium | 77 | 0.0209 | 0.0481 | -0.0435 | **0.0085** | 0.047 | 554.3 |
| Selenium | 78 | -0.3308 | -0.4926 | -0.0643 | **-0.2959** | 0.2162 | 73.07 |
| Selenium | 82 | -0.1963 | -0.1629 | -0.0184 | **-0.1259** | 0.0946 | 75.14 |
| Silver | 107 | -0.0007 | 0.0006 | 0.0003 | **0.0001** | 0.0007 | 1195 |
| Silver | 109 | 0.0009 | 0.0013 | -0.0007 | **0.0005** | 0.0011 | 220.9 |
| Thallium | 203 | 0.0042 | 0.0023 | 0.0029 | **0.0031** | 0.001 | 30.86 |
| Thallium | 205 | 0.0035 | 0.0033 | 0.0035 | **0.0034** | 0.0001 | 2.706 |
| Uranium | 238 | -0.0002 | 0.0003 | 0 | **0** | 0.0003 | 1358 |
| Vanadium | 51 | 0.0644 | 0.0588 | 0.0908 | **0.0713** | 0.0171 | 24 |
| Zinc | 66 | 0.7786 | 0.7068 | 0.7318 | **0.739** | 0.0364 | 4.93 |
| Zinc | 67 | 0.9173 | 0.8814 | 0.7836 | **0.8607** | 0.0692 | 8.04 |
| Zinc | 68 | 0.9053 | 0.8689 | 0.8313 | **0.8685** | 0.037 | 4.26 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.093 | 1.024 | 1.086 | **1.093** | n/a | n/a |
| Scandium | 45 | 1.048 | 1.075 | 1.09 | **1.048** | n/a | n/a |
| Gallium | 71 | 1.046 | 1.06 | 1.084 | **1.046** | n/a | n/a |
| Rhodium | 103 | 1.043 | 1.08 | 1.066 | **1.043** | n/a | n/a |
| Indium | 115 | 1.053 | 1.081 | 1.073 | **1.053** | n/a | n/a |
| Lutetium | 175 | 1.099 | 1.095 | 1.119 | **1.099** | n/a | n/a |
| Thorium | 232 | 1.165 | 1.138 | 1.124 | **1.165** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-012 +20A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:00 | | | | | |
| Aluminum | 27 | 28.97 | 29.29 | 28.66 | **28.97** | 0.316 | 1.091 |
| Antimony | 121 | 19.87 | 19.57 | 19.73 | **19.72** | 0.1504 | 0.7625 |
| Antimony | 123 | 19.95 | 19.9 | 19.94 | **19.93** | 0.0242 | 0.1216 |
| Arsenic | 75 | 19.78 | 19.65 | 19.86 | **19.77** | 0.1049 | 0.5309 |
| Barium | 135 | 35.97 | 35.72 | 35.78 | **35.82** | 0.1294 | 0.3611 |
| Barium | 137 | 35.93 | 35.68 | 35.81 | **35.81** | 0.1224 | 0.342 |
| Barium | 138 | 36.73 | 36.28 | 36.52 | **36.51** | 0.2208 | 0.6046 |
| Beryllium | 9 | 20.94 | 20.8 | 20.14 | **20.63** | 0.4247 | 2.059 |
| Cadmium | 111 | 19.91 | 19.95 | 19.85 | **19.9** | 0.0527 | 0.2647 |
| Cadmium | 114 | 20.21 | 19.75 | 20.01 | **19.99** | 0.2302 | 1.152 |
| Chromium | 52 | 20.1 | 19.98 | 20.17 | **20.08** | 0.0931 | 0.4635 |
| Chromium | 53 | 20.06 | 19.76 | 20.04 | **19.95** | 0.168 | 0.8423 |
| Cobalt | 59 | 20.4 | 19.96 | 20.08 | **20.15** | 0.2282 | 1.133 |
| Copper | 63 | 21.84 | 21.46 | 21.77 | **21.69** | 0.2012 | 0.9276 |
| Copper | 65 | 21.69 | 21.56 | 21.89 | **21.71** | 0.1666 | 0.7674 |
| Lead | 206 | 21.3 | 21.68 | 21.55 | **21.51** | 0.1939 | 0.9014 |
| Lead | 207 | 21.4 | 21.31 | 21.4 | **21.37** | 0.0547 | 0.2561 |
| Lead | 208 | 21.28 | 21.48 | 21.39 | **21.38** | 0.1003 | 0.4693 |
| Manganese | 55 | 21.5 | 21.39 | 21.66 | **21.51** | 0.1363 | 0.6335 |
| Molybdenum | 95 | 20.03 | 19.95 | 20.08 | **20.02** | 0.0634 | 0.3167 |
| Molybdenum | 97 | 19.95 | 19.99 | 20.35 | **20.1** | 0.2237 | 1.113 |
| Molybdenum | 98 | 20.05 | 20.2 | 20.35 | **20.2** | 0.1474 | 0.73 |
| Nickel | 60 | 20.37 | 20.45 | 20.7 | **20.51** | 0.1748 | 0.8524 |
| Nickel | 62 | 20.89 | 20.2 | 20.2 | **20.43** | 0.402 | 1.968 |
| Selenium | 77 | 19.98 | 19.76 | 19.61 | **19.78** | 0.1878 | 0.9493 |
| Selenium | 78 | 19.31 | 18.63 | 19.43 | **19.12** | 0.4323 | 2.261 |
| Selenium | 82 | 19.2 | 19.3 | 20.07 | **19.52** | 0.475 | 2.433 |
| Silver | 107 | 19.37 | 19.49 | 19.57 | **19.48** | 0.0983 | 0.5048 |
| Silver | 109 | 19.73 | 19.59 | 19.47 | **19.6** | 0.133 | 0.6788 |
| Thallium | 203 | 19.54 | 19.94 | 20.03 | **19.84** | 0.2585 | 1.303 |
| Thallium | 205 | 19.75 | 20.08 | 19.87 | **19.9** | 0.1644 | 0.8261 |
| Uranium | 238 | 19.36 | 19.99 | 20.07 | **19.81** | 0.3885 | 1.961 |
| Vanadium | 51 | 20.53 | 20.3 | 20.47 | **20.43** | 0.1227 | 0.6005 |
| Zinc | 66 | 23.39 | 23.17 | 23.81 | **23.46** | 0.3226 | 1.375 |
| Zinc | 67 | 23.67 | 23.64 | 24.33 | **23.88** | 0.3887 | 1.628 |
| Zinc | 68 | 24.14 | 23.96 | 23.85 | **23.98** | 0.1503 | 0.6268 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.047 | 1.034 | 1.025 | **1.047** | n/a | n/a |
| Scandium | 45 | 1.022 | 1.048 | 1.076 | **1.022** | n/a | n/a |
| Gallium | 71 | 1.003 | 1.03 | 1.06 | **1.003** | n/a | n/a |
| Rhodium | 103 | 1.007 | 1.025 | 1.029 | **1.007** | n/a | n/a |
| Indium | 115 | 1.038 | 1.028 | 1.036 | **1.038** | n/a | n/a |
| Lutetium | 175 | 1.074 | 1.069 | 1.044 | **1.074** | n/a | n/a |
| Thorium | 232 | 1.031 | 1.04 | 1.046 | **1.031** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009583-012S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:04 | | | | | |
| Aluminum | 27 | 27.78 | 28.02 | 27.33 | **27.71** | 0.3519 | 1.27 |
| Antimony | 121 | 20.86 | 21.03 | 20.8 | **20.9** | 0.1189 | 0.5688 |
| Antimony | 123 | 21.28 | 21.09 | 21.04 | **21.14** | 0.1314 | 0.6218 |
| Arsenic | 75 | 20.99 | 20.48 | 20.47 | **20.65** | 0.2952 | 1.43 |
| Barium | 135 | 36.63 | 36.61 | 36.72 | **36.65** | 0.0578 | 0.1577 |
| Barium | 137 | 36.52 | 37.49 | 37.04 | **37.02** | 0.4853 | 1.311 |
| Barium | 138 | 36.98 | 37.82 | 37.07 | **37.29** | 0.4593 | 1.232 |
| Beryllium | 9 | 21.15 | 20.77 | 20.45 | **20.79** | 0.3517 | 1.691 |
| Cadmium | 111 | 21.15 | 21.2 | 20.85 | **21.07** | 0.1934 | 0.9178 |
| Cadmium | 114 | 20.76 | 21.04 | 20.89 | **20.9** | 0.1393 | 0.6666 |
| Chromium | 52 | 21.45 | 21.1 | 20.36 | **20.97** | 0.5576 | 2.659 |
| Chromium | 53 | 20.79 | 20.83 | 20.47 | **20.7** | 0.1981 | 0.957 |
| Cobalt | 59 | 21.06 | 20.54 | 20.51 | **20.7** | 0.3063 | 1.479 |
| Copper | 63 | 22.49 | 21.75 | 22.16 | **22.13** | 0.3681 | 1.663 |
| Copper | 65 | 22.06 | 21.51 | 22.66 | **22.08** | 0.5724 | 2.593 |
| Lead | 206 | 24.13 | 24.27 | 24.35 | **24.25** | 0.1124 | 0.4634 |
| Lead | 207 | 20.96 | 21.19 | 21.27 | **21.14** | 0.1628 | 0.77 |
| Lead | 208 | 22.12 | 22.27 | 22.35 | **22.25** | 0.1132 | 0.5088 |
| Manganese | 55 | 22.57 | 21.91 | 21.64 | **22.04** | 0.4794 | 2.175 |
| Molybdenum | 95 | 20.84 | 20.83 | 20.72 | **20.79** | 0.0696 | 0.3349 |
| Molybdenum | 97 | 20.62 | 20.71 | 20.94 | **20.76** | 0.1662 | 0.8007 |
| Molybdenum | 98 | 20.93 | 20.77 | 21.02 | **20.9** | 0.1272 | 0.6086 |
| Nickel | 60 | 21.21 | 20.71 | 21.03 | **20.98** | 0.2503 | 1.193 |
| Nickel | 62 | 21.24 | 20.65 | 21.04 | **20.98** | 0.2976 | 1.419 |
| Selenium | 77 | 20.98 | 19.89 | 20.15 | **20.34** | 0.5687 | 2.796 |
| Selenium | 78 | 20.29 | 19.87 | 20.32 | **20.16** | 0.2512 | 1.246 |
| Selenium | 82 | 21.23 | 20.45 | 20.3 | **20.66** | 0.5013 | 2.427 |
| Silver | 107 | 19.55 | 19.37 | 19.51 | **19.48** | 0.0935 | 0.4801 |
| Silver | 109 | 19.81 | 19.72 | 19.67 | **19.73** | 0.0721 | 0.3652 |
| Thallium | 203 | 20.39 | 20.77 | 20.82 | **20.66** | 0.2333 | 1.129 |
| Thallium | 205 | 20.3 | 20.89 | 21.01 | **20.73** | 0.3758 | 1.813 |
| Uranium | 238 | 20.73 | 20.62 | 20.95 | **20.77** | 0.1694 | 0.8157 |
| Vanadium | 51 | 21.05 | 20.81 | 20.29 | **20.72** | 0.3886 | 1.875 |
| Zinc | 66 | 24 | 23.01 | 23.51 | **23.51** | 0.4944 | 2.103 |
| Zinc | 67 | 24.6 | 23.62 | 24.58 | **24.27** | 0.5565 | 2.293 |
| Zinc | 68 | 24.53 | 24.06 | 23.99 | **24.2** | 0.2929 | 1.21 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.02 | 0.989 | 0.984 | **1.02** | n/a | n/a |
| Scandium | 45 | 1.001 | 1.041 | 1.048 | **1.001** | n/a | n/a |
| Gallium | 71 | 0.996 | 1.012 | 1.033 | **0.996** | n/a | n/a |
| Rhodium | 103 | 0.997 | 1.007 | 1.016 | **0.997** | n/a | n/a |
| Indium | 115 | 1.01 | 1.018 | 1.016 | **1.01** | n/a | n/a |
| Lutetium | 175 | 1.029 | 1.032 | 1.029 | **1.029** | n/a | n/a |
| Thorium | 232 | 1.028 | 1.018 | 1.024 | **1.028** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | LCSW K1009583 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:12 | | | | | |
| Aluminum | 27 | 20.69 | 20.53 | 20.32 | **20.51** | 0.1879 | 0.916 |
| Antimony | 121 | 21.12 | 21.28 | 21.42 | **21.27** | 0.1508 | 0.7087 |
| Antimony | 123 | 21.3 | 21.48 | 21.44 | **21.4** | 0.094 | 0.4392 |
| Arsenic | 75 | 20.27 | 20.88 | 20.86 | **20.67** | 0.3462 | 1.675 |
| Barium | 135 | 20.05 | 20.42 | 20.48 | **20.31** | 0.2355 | 1.159 |
| Barium | 137 | 20.02 | 20.17 | 20.52 | **20.23** | 0.254 | 1.255 |
| Barium | 138 | 20.51 | 20.72 | 20.42 | **20.55** | 0.1505 | 0.7324 |
| Beryllium | 9 | 20.44 | 21.11 | 21.04 | **20.86** | 0.366 | 1.754 |
| Cadmium | 111 | 21.23 | 21.16 | 21.2 | **21.2** | 0.0314 | 0.1482 |
| Cadmium | 114 | 20.97 | 21.21 | 21.07 | **21.08** | 0.1194 | 0.5664 |
| Chromium | 52 | 21.25 | 21.1 | 20.88 | **21.07** | 0.1855 | 0.8804 |
| Chromium | 53 | 20.83 | 20.68 | 21.03 | **20.85** | 0.1784 | 0.8559 |
| Cobalt | 59 | 20.79 | 20.61 | 21.19 | **20.86** | 0.3008 | 1.442 |
| Copper | 63 | 21.15 | 21.07 | 20.89 | **21.04** | 0.1328 | 0.6314 |
| Copper | 65 | 21.07 | 21.06 | 20.55 | **20.89** | 0.2955 | 1.415 |
| Lead | 206 | 22.35 | 22.51 | 22.89 | **22.58** | 0.2781 | 1.231 |
| Lead | 207 | 19.23 | 19.54 | 19.88 | **19.55** | 0.324 | 1.657 |
| Lead | 208 | 20.26 | 20.5 | 20.93 | **20.56** | 0.3394 | 1.651 |
| Manganese | 55 | 20.94 | 21 | 20.76 | **20.9** | 0.1264 | 0.605 |
| Molybdenum | 95 | 20.8 | 20.74 | 20.57 | **20.7** | 0.122 | 0.5891 |
| Molybdenum | 97 | 20.9 | 20.81 | 20.91 | **20.88** | 0.056 | 0.2681 |
| Molybdenum | 98 | 20.8 | 20.76 | 20.92 | **20.83** | 0.0806 | 0.387 |
| Nickel | 60 | 21.27 | 20.94 | 21.42 | **21.21** | 0.2437 | 1.149 |
| Nickel | 62 | 21.12 | 21.55 | 20.75 | **21.14** | 0.3999 | 1.892 |
| Selenium | 77 | 21.05 | 21.05 | 20.48 | **20.86** | 0.327 | 1.568 |
| Selenium | 78 | 20.16 | 20.59 | 20.64 | **20.46** | 0.2654 | 1.297 |
| Selenium | 82 | 20.68 | 21.85 | 21.17 | **21.23** | 0.5851 | 2.755 |
| Silver | 107 | 19.58 | 19.75 | 19.58 | **19.64** | 0.102 | 0.5194 |
| Silver | 109 | 19.76 | 20.15 | 19.98 | **19.96** | 0.1933 | 0.9685 |
| Thallium | 203 | 20.28 | 20.55 | 21.02 | **20.62** | 0.3769 | 1.828 |
| Thallium | 205 | 20.15 | 20.72 | 21.2 | **20.69** | 0.5259 | 2.542 |
| Uranium | 238 | 20.44 | 20.93 | 21.11 | **20.83** | 0.3457 | 1.66 |
| Vanadium | 51 | 21.43 | 21.1 | 20.77 | **21.1** | 0.3287 | 1.558 |
| Zinc | 66 | 20.64 | 21.66 | 20.96 | **21.09** | 0.5215 | 2.473 |
| Zinc | 67 | 20.72 | 21.38 | 21.03 | **21.04** | 0.3342 | 1.588 |
| Zinc | 68 | 21.37 | 21.45 | 21.1 | **21.3** | 0.1822 | 0.8551 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.993 | 1.006 | 1.021 | **0.993** | n/a | n/a |
| Scandium | 45 | 0.99 | 1.064 | 1.075 | **0.99** | n/a | n/a |
| Gallium | 71 | 0.976 | 1.043 | 1.06 | **0.976** | n/a | n/a |
| Rhodium | 103 | 0.988 | 1.018 | 1.03 | **0.988** | n/a | n/a |
| Indium | 115 | 1.002 | 1.035 | 1.042 | **1.002** | n/a | n/a |
| Lutetium | 175 | 1.017 | 1.035 | 1.061 | **1.017** | n/a | n/a |
| Thorium | 232 | 1 | 1.01 | 1.042 | **1** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | WATER CRA | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:20 | | | | | |
| Aluminum | 27 | 2.111 | 1.983 | 1.99 | **2.028** | 0.072 | 3.55 |
| Antimony | 121 | 0.0626 | 0.057 | 0.0547 | **0.0581** | 0.0041 | 6.99 |
| Antimony | 123 | 0.0652 | 0.058 | 0.0608 | **0.0613** | 0.0036 | 5.901 |
| Arsenic | 75 | 0.5038 | 0.5434 | 0.4774 | **0.5082** | 0.0332 | 6.535 |
| Barium | 135 | 0.0513 | 0.0643 | 0.0472 | **0.0542** | 0.0089 | 16.46 |
| Barium | 137 | 0.049 | 0.0603 | 0.0521 | **0.0538** | 0.0058 | 10.79 |
| Barium | 138 | 0.0537 | 0.0532 | 0.0476 | **0.0515** | 0.0034 | 6.613 |
| Beryllium | 9 | 0.0279 | 0.0214 | 0.0226 | **0.024** | 0.0035 | 14.41 |
| Cadmium | 111 | 0.0237 | 0.0282 | 0.0214 | **0.0245** | 0.0035 | 14.19 |
| Cadmium | 114 | 0.02 | 0.0188 | 0.0212 | **0.02** | 0.0012 | 6.043 |
| Chromium | 52 | 0.2266 | 0.2248 | 0.1954 | **0.2156** | 0.0175 | 8.126 |
| Chromium | 53 | 0.2769 | 0.2401 | 0.2055 | **0.2408** | 0.0357 | 14.83 |
| Cobalt | 59 | 0.0209 | 0.0201 | 0.0223 | **0.0211** | 0.0011 | 5.375 |
| Copper | 63 | 0.105 | 0.1039 | 0.0977 | **0.1022** | 0.004 | 3.883 |
| Copper | 65 | 0.1076 | 0.1095 | 0.1244 | **0.1138** | 0.0092 | 8.096 |
| Lead | 206 | 0.0226 | 0.0211 | 0.0205 | **0.0214** | 0.0011 | 5.166 |
| Lead | 207 | 0.0211 | 0.0212 | 0.0216 | **0.0213** | 0.0003 | 1.19 |
| Lead | 208 | 0.0221 | 0.0213 | 0.0213 | **0.0215** | 0.0005 | 2.165 |
| Manganese | 55 | 0.0537 | 0.0535 | 0.0525 | **0.0532** | 0.0006 | 1.175 |
| Molybdenum | 95 | 0.0696 | 0.0645 | 0.0625 | **0.0655** | 0.0036 | 5.544 |
| Molybdenum | 97 | 0.066 | 0.068 | 0.0663 | **0.0667** | 0.0011 | 1.627 |
| Molybdenum | 98 | 0.0672 | 0.0675 | 0.0669 | **0.0672** | 0.0003 | 0.4483 |
| Nickel | 60 | 0.1984 | 0.1964 | 0.1771 | **0.1906** | 0.0118 | 6.175 |
| Nickel | 62 | 0.1671 | 0.2549 | 0.1177 | **0.1799** | 0.0695 | 38.63 |
| Selenium | 77 | 1.097 | 1.183 | 0.9326 | **1.071** | 0.1275 | 11.9 |
| Selenium | 78 | 0.8104 | 0.7371 | 0.7645 | **0.7707** | 0.037 | 4.806 |
| Selenium | 82 | 1.066 | 1.224 | 0.6857 | **0.992** | 0.2767 | 27.9 |
| Silver | 107 | 0.0202 | 0.0193 | 0.0212 | **0.0202** | 0.0009 | 4.571 |
| Silver | 109 | 0.0202 | 0.0223 | 0.0199 | **0.0208** | 0.0013 | 6.308 |
| Thallium | 203 | 0.02 | 0.0206 | 0.0246 | **0.0217** | 0.0025 | 11.57 |
| Thallium | 205 | 0.0206 | 0.0241 | 0.0238 | **0.0228** | 0.0019 | 8.46 |
| Uranium | 238 | 0.0173 | 0.0162 | 0.0183 | **0.0173** | 0.001 | 6.033 |
| Vanadium | 51 | 0.2163 | 0.2018 | 0.1969 | **0.205** | 0.0101 | 4.914 |
| Zinc | 66 | 0.4988 | 0.494 | 0.5097 | **0.5008** | 0.008 | 1.601 |
| Zinc | 67 | 0.5138 | 0.5065 | 0.4813 | **0.5006** | 0.0171 | 3.41 |
| Zinc | 68 | 0.5157 | 0.4866 | 0.468 | **0.4901** | 0.024 | 4.9 |

SMB 9/21/10

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.07 | 1.033 | 1.054 | **1.07** | n/a | n/a |
| Scandium | 45 | 0.985 | 1.042 | 1.071 | **0.985** | n/a | n/a |
| Gallium | 71 | 0.977 | 1.034 | 1.082 | **0.977** | n/a | n/a |
| Rhodium | 103 | 1.025 | 1.049 | 1.057 | **1.025** | n/a | n/a |
| Indium | 115 | 1.045 | 1.055 | 1.071 | **1.045** | n/a | n/a |
| Lutetium | 175 | 1.108 | 1.088 | 1.071 | **1.108** | n/a | n/a |
| Thorium | 232 | 1.089 | 1.078 | 1.082 | **1.089** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCV3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:26 | | | | | |
| Aluminum | 27 | 25.6 | 25.32 | 25.72 | **25.54** | 0.2032 | 0.7954 |
| Antimony | 121 | 24.54 | 24.75 | 24.81 | **24.7** | 0.1446 | 0.5854 |
| Antimony | 123 | 24.75 | 24.91 | 25.45 | **25.03** | 0.3691 | 1.474 |
| Arsenic | 75 | 25.81 | 25.42 | 26.15 | **25.8** | 0.3651 | 1.415 |
| Barium | 135 | 24.76 | 24.54 | 24.85 | **24.72** | 0.1566 | 0.6336 |
| Barium | 137 | 24.72 | 25.17 | 24.69 | **24.86** | 0.2667 | 1.073 |
| Barium | 138 | 25.16 | 25.24 | 24.96 | **25.12** | 0.1414 | 0.563 |
| Beryllium | 9 | 25.15 | 24.22 | 24.55 | **24.64** | 0.4724 | 1.917 |
| Cadmium | 111 | 25.23 | 25.17 | 24.94 | **25.11** | 0.1537 | 0.6122 |
| Cadmium | 114 | 25.05 | 25.12 | 25.26 | **25.14** | 0.1026 | 0.4079 |
| Chromium | 52 | 24.64 | 24.3 | 25.21 | **24.72** | 0.4575 | 1.851 |
| Chromium | 53 | 24.97 | 24.09 | 24.42 | **24.49** | 0.4435 | 1.811 |
| Cobalt | 59 | 24.78 | 24.83 | 25.01 | **24.87** | 0.1202 | 0.4831 |
| Copper | 63 | 25.18 | 24.89 | 25.57 | **25.21** | 0.3412 | 1.353 |
| Copper | 65 | 24.68 | 24.63 | 24.71 | **24.67** | 0.0444 | 0.1798 |
| Lead | 206 | 24.85 | 25.11 | 24.63 | **24.86** | 0.2389 | 0.9607 |
| Lead | 207 | 25 | 24.6 | 24.7 | **24.77** | 0.2055 | 0.8298 |
| Lead | 208 | 24.81 | 24.77 | 24.43 | **24.67** | 0.2088 | 0.8465 |
| Manganese | 55 | 25.03 | 24.8 | 25.43 | **25.09** | 0.319 | 1.272 |
| Molybdenum | 95 | 24.92 | 24.55 | 24.94 | **24.8** | 0.2175 | 0.8768 |
| Molybdenum | 97 | 25.19 | 24.49 | 24.8 | **24.83** | 0.3499 | 1.409 |
| Molybdenum | 98 | 25.38 | 24.6 | 24.77 | **24.92** | 0.4061 | 1.63 |
| Nickel | 60 | 25.45 | 24.75 | 25.49 | **25.23** | 0.4151 | 1.645 |
| Nickel | 62 | 25.51 | 24.51 | 25.03 | **25.02** | 0.5027 | 2.009 |
| Selenium | 77 | 25.88 | 24.46 | 25.12 | **25.15** | 0.7102 | 2.824 |
| Selenium | 78 | 25.54 | 25.05 | 25.9 | **25.5** | 0.4296 | 1.685 |
| Selenium | 82 | 25.83 | 25.01 | 25.92 | **25.59** | 0.5014 | 1.959 |
| Silver | 107 | 25.02 | 24.67 | 24.75 | **24.82** | 0.1836 | 0.7397 |
| Silver | 109 | 25.17 | 24.78 | 24.92 | **24.96** | 0.2003 | 0.8025 |
| Thallium | 203 | 25.36 | 24.86 | 24.62 | **24.94** | 0.3774 | 1.513 |
| Thallium | 205 | 25.29 | 25.17 | 25.23 | **25.23** | 0.0565 | 0.224 |
| Uranium | 238 | 25.2 | 24.57 | 25.01 | **24.93** | 0.3231 | 1.296 |
| Vanadium | 51 | 25.4 | 25.13 | 25.5 | **25.34** | 0.193 | 0.7615 |
| Zinc | 66 | 24.72 | 24.66 | 25.36 | **24.91** | 0.3891 | 1.562 |
| Zinc | 67 | 25.5 | 24.21 | 25.28 | **25** | 0.6904 | 2.762 |
| Zinc | 68 | 25.22 | 24.94 | 25.61 | **25.26** | 0.332 | 1.315 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.973 | 0.943 | 0.954 | **0.973** | n/a | n/a |
| Scandium | 45 | 0.945 | 1.001 | 1.047 | **0.945** | n/a | n/a |
| Gallium | 71 | 0.956 | 1.004 | 1.056 | **0.956** | n/a | n/a |
| Rhodium | 103 | 0.976 | 0.982 | 1 | **0.976** | n/a | n/a |
| Indium | 115 | 0.976 | 0.987 | 1.005 | **0.976** | n/a | n/a |
| Lutetium | 175 | 1.012 | 0.996 | 0.995 | **1.012** | n/a | n/a |
| Thorium | 232 | 0.999 | 0.976 | 0.986 | **0.999** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCB3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:38 | | | | | |
| Aluminum | 27 | 0.0611 | 0.0822 | 0.1515 | **0.0983** | 0.0473 | 48.11 |
| Antimony | 121 | 0.0262 | 0.018 | 0.0168 | **0.0203** | 0.0051 | 25.19 |
| Antimony | 123 | 0.0237 | 0.0218 | 0.0159 | **0.0205** | 0.0041 | 20.01 |
| Arsenic | 75 | -0.0024 | 0.0206 | 0.0502 | **0.0228** | 0.0264 | 115.7 |
| Barium | 135 | 0.0007 | 0.0036 | 0.0064 | **0.0035** | 0.0029 | 80.57 |
| Barium | 137 | 0.0013 | 0.0039 | 0.0071 | **0.0041** | 0.0029 | 70.92 |
| Barium | 138 | 0.0037 | 0.0045 | 0.0059 | **0.0047** | 0.0011 | 23.66 |
| Beryllium | 9 | 0.0052 | 0.0038 | 0.0063 | **0.0051** | 0.0013 | 24.5 |
| Cadmium | 111 | -0.0006 | 0.0005 | 0.003 | **0.001** | 0.0019 | 185.4 |
| Cadmium | 114 | -0.0006 | 0.0021 | -0.0006 | **0.0003** | 0.0016 | 495.2 |
| Chromium | 52 | -0.0055 | -0.0417 | -0.0214 | **-0.0229** | 0.0182 | 79.49 |
| Chromium | 53 | 0.1233 | 0.0331 | 0.0374 | **0.0646** | 0.0509 | 78.8 |
| Cobalt | 59 | 0.0015 | 0.0014 | 0.0011 | **0.0014** | 0.0002 | 13.72 |
| Copper | 63 | -0.0044 | -0.0013 | 0.0103 | **0.0015** | 0.0077 | 507.3 |
| Copper | 65 | 0.0088 | 0.0052 | 0.0101 | **0.008** | 0.0025 | 31.65 |
| Lead | 206 | 0.0014 | 0.0003 | 0.002 | **0.0012** | 0.0009 | 70.87 |
| Lead | 207 | 0.0031 | 0.0003 | 0.0046 | **0.0027** | 0.0022 | 80.8 |
| Lead | 208 | 0.0018 | 0.0007 | 0.0026 | **0.0017** | 0.001 | 56.51 |
| Manganese | 55 | 0.0036 | 0.0026 | 0.0021 | **0.0027** | 0.0008 | 27.86 |
| Molybdenum | 95 | 0.005 | 0.0073 | 0.0077 | **0.0067** | 0.0015 | 22.31 |
| Molybdenum | 97 | 0.006 | 0.008 | -0.0016 | **0.0041** | 0.005 | 122 |
| Molybdenum | 98 | 0.0063 | 0.0095 | 0.0066 | **0.0075** | 0.0018 | 23.86 |
| Nickel | 60 | -0.009 | 0.0153 | 0.0003 | **0.0022** | 0.0123 | 561.5 |
| Nickel | 62 | -0.0407 | 0.0887 | -0.0065 | **0.0138** | 0.0671 | 485.3 |
| Selenium | 77 | 0.0118 | -0.0417 | -0.0146 | **-0.0148** | 0.0267 | 180.1 |
| Selenium | 78 | -0.1665 | -0.5679 | -0.4505 | **-0.3949** | 0.2064 | 52.25 |
| Selenium | 82 | -0.0323 | 0.0325 | 0.1819 | **0.0607** | 0.1099 | 181 |
| Silver | 107 | 0.0025 | 0.0014 | 0.002 | **0.002** | 0.0006 | 28.43 |
| Silver | 109 | 0.0024 | 0.0019 | 0.0028 | **0.0024** | 0.0005 | 20.82 |
| Thallium | 203 | 0.0025 | 0.0028 | 0.0041 | **0.0031** | 0.0009 | 27.78 |
| Thallium | 205 | 0.0019 | 0.0027 | 0.0027 | **0.0024** | 0.0005 | 19.43 |
| Uranium | 238 | -0.0017 | -0.002 | -0.0009 | **-0.0015** | 0.0005 | 35.75 |
| Vanadium | 51 | -0.0062 | -0.0089 | -0.0098 | **-0.0083** | 0.0019 | 22.76 |
| Zinc | 66 | 0.0077 | 0.0154 | 0.0219 | **0.015** | 0.0071 | 47.3 |
| Zinc | 67 | 0.0333 | 0.0344 | 0.0509 | **0.0395** | 0.0098 | 24.88 |
| Zinc | 68 | -0.0105 | 0.0053 | 0.0258 | **0.0069** | 0.0182 | 265.6 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.081 | 1.048 | 1.072 | **1.081** | n/a | n/a |
| Scandium | 45 | 0.969 | 1.033 | 1.038 | **0.969** | n/a | n/a |
| Gallium | 71 | 0.985 | 1.037 | 1.06 | **0.985** | n/a | n/a |
| Rhodium | 103 | 1.016 | 1.033 | 1.037 | **1.016** | n/a | n/a |
| Indium | 115 | 1.046 | 1.054 | 1.049 | **1.046** | n/a | n/a |
| Lutetium | 175 | 1.117 | 1.114 | 1.087 | **1.117** | n/a | n/a |
| Thorium | 232 | 1.12 | 1.083 | 1.086 | **1.12** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009283-MB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:42 | | | | | |
| Aluminum | 27 | 0.2792 | 0.2739 | 0.283 | **0.2787** | 0.0046 | 1.648 |
| Antimony | 121 | 0.0051 | 0.0033 | 0.0041 | **0.0042** | 0.0009 | 21.5 |
| Antimony | 123 | 0.0075 | 0.0074 | 0.0097 | **0.0082** | 0.0013 | 15.99 |
| Arsenic | 75 | 0.0053 | -0.0097 | 0.0099 | **0.0019** | 0.0103 | 547.5 |
| Barium | 135 | 0.0062 | 0.0042 | 0.005 | **0.0051** | 0.001 | 19.51 |
| Barium | 137 | 0.0044 | 0.0071 | 0.0063 | **0.0059** | 0.0013 | 22.64 |
| Barium | 138 | 0.0053 | 0.0078 | 0.0104 | **0.0078** | 0.0026 | 32.68 |
| Beryllium | 9 | 0.0033 | 0.0009 | 0.0035 | **0.0025** | 0.0015 | 57.68 |
| Cadmium | 111 | 0.0004 | 0.0016 | 0.0032 | **0.0017** | 0.0014 | 81.7 |
| Cadmium | 114 | 0.0008 | 0.0008 | 0.0004 | **0.0007** | 0.0002 | 35.36 |
| Chromium | 52 | 0.0736 | 0.0664 | 0.0407 | **0.0602** | 0.0173 | 28.74 |
| Chromium | 53 | 0.056 | 0.0063 | 0.0359 | **0.0327** | 0.025 | 76.32 |
| Cobalt | 59 | 0.0029 | 0.0025 | 0.0029 | **0.0028** | 0.0002 | 7.171 |
| Copper | 63 | 0.0019 | 0.0062 | 0.0014 | **0.0032** | 0.0026 | 83.47 |
| Copper | 65 | 0.0085 | 0.0083 | 0.0109 | **0.0092** | 0.0015 | 15.97 |
| Lead | 206 | 0.0018 | -0.0012 | 0.0043 | **0.0016** | 0.0027 | 165.9 |
| Lead | 207 | 0.0014 | 0.0013 | 0.0014 | **0.0013** | 0.0001 | 6.05 |
| Lead | 208 | 0.0009 | 0.0014 | 0.0025 | **0.0016** | 0.0008 | 51.96 |
| Manganese | 55 | 0.0018 | -0.0045 | 0.0035 | **0.0002** | 0.0042 | 1795 |
| Molybdenum | 95 | 0.0059 | 0.0025 | 0.0041 | **0.0042** | 0.0017 | 40.58 |
| Molybdenum | 97 | -0.0002 | 0.0038 | 0.005 | **0.0029** | 0.0027 | 93.41 |
| Molybdenum | 98 | 0.0063 | 0.0036 | 0.0029 | **0.0042** | 0.0018 | 42.95 |
| Nickel | 60 | 0.0072 | 0.0105 | 0.0081 | **0.0086** | 0.0017 | 20.29 |
| Nickel | 62 | 0.0437 | -0.031 | -0.0062 | **0.0022** | 0.0381 | 1765 |
| Selenium | 77 | 0.0162 | 0.152 | -0.0773 | **0.0303** | 0.1153 | 380.5 |
| Selenium | 78 | -0.3275 | -0.6766 | -0.6194 | **-0.5412** | 0.1872 | 34.59 |
| Selenium | 82 | -0.0092 | 0.0945 | -0.0614 | **0.0079** | 0.0794 | 998.3 |
| Silver | 107 | -0.0001 | 0 | 0.0014 | **0.0004** | 0.0008 | 201.2 |
| Silver | 109 | -0.0015 | -0.0005 | 0.002 | **0** | 0.0018 | 114200 |
| Thallium | 203 | 0.0042 | 0.0029 | 0.0046 | **0.0039** | 0.0009 | 21.98 |
| Thallium | 205 | 0.0029 | 0.003 | 0.0038 | **0.0032** | 0.0005 | 14.67 |
| Uranium | 238 | -0.0028 | -0.0033 | -0.0028 | **-0.003** | 0.0003 | 8.721 |
| Vanadium | 51 | 0.0207 | 0.0245 | 0.0099 | **0.0184** | 0.0076 | 41.19 |
| Zinc | 66 | 0.1241 | 0.1265 | 0.1179 | **0.1228** | 0.0044 | 3.615 |
| Zinc | 67 | 0.1348 | 0.0895 | 0.125 | **0.1164** | 0.0238 | 20.47 |
| Zinc | 68 | 0.1189 | 0.1126 | 0.1304 | **0.1206** | 0.009 | 7.487 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.057 | 1.022 | 1.004 | **1.057** | n/a | n/a |
| Scandium | 45 | 1.008 | 1.041 | 1.089 | **1.008** | n/a | n/a |
| Gallium | 71 | 1.011 | 1.047 | 1.066 | **1.011** | n/a | n/a |
| Rhodium | 103 | 1.01 | 1.044 | 1.048 | **1.01** | n/a | n/a |
| Indium | 115 | 1.035 | 1.06 | 1.062 | **1.035** | n/a | n/a |
| Lutetium | 175 | 1.065 | 1.06 | 1.08 | **1.065** | n/a | n/a |
| Thorium | 232 | 1.075 | 1.052 | 1.066 | **1.075** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009283-017 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:47 | | | | | |
| Aluminum | 27 | 17.87 | 17.92 | 18.27 | **18.02** | 0.2156 | 1.196 |
| Antimony | 121 | 0.014 | 0.0095 | 0.0113 | **0.0116** | 0.0022 | 19.36 |
| Antimony | 123 | 0.0161 | 0.013 | 0.0102 | **0.0131** | 0.0029 | 22.29 |
| Arsenic | 75 | -0.048 | 0.0761 | -0.0262 | **0.0006** | 0.0663 | 10890 |
| Barium | 135 | 0.6459 | 0.663 | 0.6868 | **0.6652** | 0.0206 | 3.089 |
| Barium | 137 | 0.6678 | 0.6663 | 0.6824 | **0.6722** | 0.0089 | 1.328 |
| Barium | 138 | 0.667 | 0.6775 | 0.6689 | **0.6711** | 0.0056 | 0.8326 |
| Beryllium | 9 | 0.0035 | 0.006 | 0.0023 | **0.0039** | 0.0019 | 48.43 |
| Cadmium | 111 | 0.1697 | 0.1709 | 0.1813 | **0.174** | 0.0064 | 3.664 |
| Cadmium | 114 | 0.1719 | 0.1862 | 0.1845 | **0.1809** | 0.0078 | 4.311 |
| Chromium | 52 | 0.3495 | 0.3228 | 0.3153 | **0.3292** | 0.018 | 5.461 |
| Chromium | 53 | 0.3036 | 0.2825 | 0.2826 | **0.2896** | 0.0122 | 4.204 |
| Cobalt | 59 | 0.0077 | 0.0121 | 0.0116 | **0.0104** | 0.0024 | 23.08 |
| Copper | 63 | 0.5091 | 0.5168 | 0.5099 | **0.5119** | 0.0042 | 0.8297 |
| Copper | 65 | 0.4813 | 0.5046 | 0.4825 | **0.4895** | 0.0131 | 2.685 |
| Lead | 206 | 0.2259 | 0.2199 | 0.2302 | **0.2253** | 0.0052 | 2.29 |
| Lead | 207 | 0.2109 | 0.2242 | 0.2253 | **0.2201** | 0.008 | 3.636 |
| Lead | 208 | 0.2173 | 0.2176 | 0.2209 | **0.2186** | 0.002 | 0.9123 |
| Manganese | 55 | 0.7354 | 0.7203 | 0.7192 | **0.725** | 0.0091 | 1.252 |
| Molybdenum | 95 | 0.0039 | 0.0074 | 0.0063 | **0.0059** | 0.0018 | 30.61 |
| Molybdenum | 97 | 0.0058 | 0.0042 | 0.0031 | **0.0044** | 0.0013 | 30.72 |
| Molybdenum | 98 | 0.0085 | 0.0037 | 0.0067 | **0.0063** | 0.0024 | 38.12 |
| Nickel | 60 | 0.2575 | 0.2526 | 0.2671 | **0.2591** | 0.0074 | 2.843 |
| Nickel | 62 | 0.2007 | 0.1983 | 0.2505 | **0.2165** | 0.0295 | 13.62 |
| Selenium | 77 | -0.0427 | -0.0605 | -0.1132 | **-0.0721** | 0.0367 | 50.88 |
| Selenium | 78 | -0.3306 | -0.4084 | -0.6393 | **-0.4594** | 0.1606 | 34.95 |
| Selenium | 82 | -0.2569 | 0.1809 | -0.2651 | **-0.1137** | 0.2551 | 224.4 |
| Silver | 107 | 0.0003 | 0.0007 | 0.002 | **0.001** | 0.0009 | 86.14 |
| Silver | 109 | 0.0004 | 0 | 0.0003 | **0.0002** | 0.0002 | 99.52 |
| Thallium | 203 | 0.0013 | 0.0024 | 0.0025 | **0.0021** | 0.0007 | 32.77 |
| Thallium | 205 | 0.0027 | 0.003 | 0.0036 | **0.0031** | 0.0005 | 16.05 |
| Uranium | 238 | -0.0029 | -0.0033 | -0.0028 | **-0.003** | 0.0003 | 10.03 |
| Vanadium | 51 | 0.033 | 0.0283 | 0.0214 | **0.0276** | 0.0058 | 21.1 |
| Zinc | 66 | 11.42 | 11.32 | 11.4 | **11.38** | 0.0514 | 0.4513 |
| Zinc | 67 | 11.03 | 10.78 | 10.93 | **10.91** | 0.1252 | 1.147 |
| Zinc | 68 | 11.2 | 10.87 | 11.11 | **11.06** | 0.1736 | 1.57 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.018 | 0.989 | 0.987 | **1.018** | n/a | n/a |
| Scandium | 45 | 1.011 | 1.074 | 1.075 | **1.011** | n/a | n/a |
| Gallium | 71 | 1.018 | 1.05 | 1.081 | **1.018** | n/a | n/a |
| Rhodium | 103 | 1.023 | 1.034 | 1.051 | **1.023** | n/a | n/a |
| Indium | 115 | 1.041 | 1.045 | 1.052 | **1.041** | n/a | n/a |
| Lutetium | 175 | 1.064 | 1.062 | 1.063 | **1.064** | n/a | n/a |
| Thorium | 232 | 1.076 | 1.048 | 1.065 | **1.076** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009283-017 1/5L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:51 | | | | | |
| Aluminum | 27 | 3.15 | 3.166 | 3.168 | **3.161** | 0.0099 | 0.3127 |
| Antimony | 121 | -0.0057 | -0.0047 | -0.0056 | **-0.0053** | 0.0006 | 10.82 |
| Antimony | 123 | -0.0033 | -0.0066 | -0.0054 | **-0.0051** | 0.0017 | 32.87 |
| Arsenic | 75 | 0.0374 | 0.0913 | -0.0167 | **0.0373** | 0.054 | 144.7 |
| Barium | 135 | 0.1332 | 0.1278 | 0.1478 | **0.1363** | 0.0103 | 7.582 |
| Barium | 137 | 0.132 | 0.1372 | 0.1314 | **0.1335** | 0.0032 | 2.363 |
| Barium | 138 | 0.1424 | 0.1395 | 0.1379 | **0.1399** | 0.0023 | 1.616 |
| Beryllium | 9 | 0.0009 | -0.0013 | -0.0009 | **-0.0004** | 0.0012 | 287 |
| Cadmium | 111 | 0.0353 | 0.0363 | 0.0366 | **0.0361** | 0.0007 | 1.931 |
| Cadmium | 114 | 0.0357 | 0.0353 | 0.0379 | **0.0363** | 0.0014 | 3.925 |
| Chromium | 52 | 0.0451 | 0.0193 | 0.0393 | **0.0345** | 0.0136 | 39.25 |
| Chromium | 53 | 0.0551 | 0.0651 | 0.0375 | **0.0526** | 0.014 | 26.58 |
| Cobalt | 59 | 0.0038 | 0.0025 | 0.0035 | **0.0033** | 0.0006 | 19.8 |
| Copper | 63 | 0.1051 | 0.1088 | 0.0979 | **0.1039** | 0.0056 | 5.346 |
| Copper | 65 | 0.1086 | 0.1063 | 0.1302 | **0.1151** | 0.0132 | 11.46 |
| Lead | 206 | 0.0527 | 0.0508 | 0.048 | **0.0505** | 0.0024 | 4.686 |
| Lead | 207 | 0.0466 | 0.0447 | 0.0463 | **0.0459** | 0.001 | 2.263 |
| Lead | 208 | 0.0483 | 0.0462 | 0.0471 | **0.0472** | 0.001 | 2.201 |
| Manganese | 55 | 0.1502 | 0.14 | 0.1384 | **0.1428** | 0.0064 | 4.467 |
| Molybdenum | 95 | 0.0051 | 0.0004 | 0.0029 | **0.0028** | 0.0024 | 85.82 |
| Molybdenum | 97 | 0.0002 | 0.0029 | 0.0015 | **0.0015** | 0.0014 | 90.08 |
| Molybdenum | 98 | 0.0007 | 0.0047 | 0.0036 | **0.003** | 0.0021 | 69.79 |
| Nickel | 60 | 0.0485 | 0.0384 | 0.0404 | **0.0424** | 0.0054 | 12.65 |
| Nickel | 62 | -0.0507 | 0.1074 | 0.07 | **0.0423** | 0.0826 | 195.6 |
| Selenium | 77 | -0.0092 | -0.0927 | -0.0932 | **-0.065** | 0.0484 | 74.4 |
| Selenium | 78 | -0.4642 | -0.1757 | -0.3012 | **-0.3137** | 0.1446 | 46.1 |
| Selenium | 82 | 0.1174 | 0.2522 | -0.1516 | **0.0727** | 0.2056 | 282.9 |
| Silver | 107 | 0 | 0 | 0.0004 | **0.0001** | 0.0002 | 173.9 |
| Silver | 109 | -0.0019 | -0.0005 | -0.0004 | **-0.0009** | 0.0008 | 89.68 |
| Thallium | 203 | 0.001 | 0.0024 | 0.0017 | **0.0017** | 0.0007 | 40 |
| Thallium | 205 | 0.0022 | 0.003 | 0.0023 | **0.0025** | 0.0004 | 17.86 |
| Uranium | 238 | -0.0009 | -0.0016 | -0.0013 | **-0.0013** | 0.0003 | 27.84 |
| Vanadium | 51 | 0.0065 | -0.0069 | 0.0071 | **0.0022** | 0.0079 | 354.9 |
| Zinc | 66 | 2.384 | 2.456 | 2.458 | **2.433** | 0.0419 | 1.723 |
| Zinc | 67 | 2.361 | 2.234 | 2.208 | **2.268** | 0.0823 | 3.63 |
| Zinc | 68 | 2.404 | 2.395 | 2.369 | **2.389** | 0.018 | 0.7528 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.04 | 1.018 | 1 | **1.04** | n/a | n/a |
| Scandium | 45 | 1.015 | 1.083 | 1.102 | **1.015** | n/a | n/a |
| Gallium | 71 | 1.02 | 1.072 | 1.092 | **1.02** | n/a | n/a |
| Rhodium | 103 | 1.03 | 1.039 | 1.041 | **1.03** | n/a | n/a |
| Indium | 115 | 1.04 | 1.053 | 1.047 | **1.04** | n/a | n/a |
| Lutetium | 175 | 1.074 | 1.072 | 1.067 | **1.074** | n/a | n/a |
| Thorium | 232 | 1.128 | 1.088 | 1.097 | **1.128** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009283-017 +20A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 10:56 | | | | | |
| Aluminum | 27 | 34.74 | 34.21 | 35.29 | **34.75** | 0.5434 | 1.564 |
| Antimony | 121 | 20.05 | 20.39 | 19.94 | **20.13** | 0.2329 | 1.157 |
| Antimony | 123 | 20.17 | 20.23 | 20.31 | **20.24** | 0.0669 | 0.3307 |
| Arsenic | 75 | 20.15 | 19.61 | 19.98 | **19.91** | 0.276 | 1.386 |
| Barium | 135 | 20.85 | 20.58 | 20.32 | **20.59** | 0.264 | 1.282 |
| Barium | 137 | 20.66 | 20.64 | 20.56 | **20.62** | 0.054 | 0.262 |
| Barium | 138 | 20.78 | 20.73 | 20.83 | **20.78** | 0.0504 | 0.2423 |
| Beryllium | 9 | 20.28 | 20.37 | 20.99 | **20.55** | 0.3851 | 1.874 |
| Cadmium | 111 | 20.39 | 20.59 | 20.42 | **20.46** | 0.108 | 0.5277 |
| Cadmium | 114 | 20.53 | 20.58 | 20.49 | **20.53** | 0.0483 | 0.235 |
| Chromium | 52 | 20.61 | 20.38 | 20.41 | **20.47** | 0.1268 | 0.6197 |
| Chromium | 53 | 20.13 | 20.22 | 20.06 | **20.14** | 0.0835 | 0.4147 |
| Cobalt | 59 | 20.71 | 20.01 | 19.63 | **20.12** | 0.5517 | 2.743 |
| Copper | 63 | 21.26 | 20.58 | 20.44 | **20.76** | 0.4389 | 2.114 |
| Copper | 65 | 20.46 | 20.02 | 20.31 | **20.26** | 0.2278 | 1.124 |
| Lead | 206 | 19.98 | 20.33 | 20.25 | **20.18** | 0.1834 | 0.9087 |
| Lead | 207 | 19.94 | 20.01 | 19.97 | **19.97** | 0.0339 | 0.1697 |
| Lead | 208 | 19.99 | 20.07 | 19.94 | **20** | 0.0638 | 0.3193 |
| Manganese | 55 | 21.12 | 20.47 | 20.59 | **20.73** | 0.347 | 1.674 |
| Molybdenum | 95 | 20.09 | 20.02 | 20.03 | **20.05** | 0.0353 | 0.1759 |
| Molybdenum | 97 | 19.98 | 20.24 | 20.11 | **20.11** | 0.1313 | 0.6529 |
| Molybdenum | 98 | 19.88 | 20.2 | 20.19 | **20.09** | 0.1845 | 0.9183 |
| Nickel | 60 | 20.52 | 20.67 | 20.07 | **20.42** | 0.3158 | 1.547 |
| Nickel | 62 | 20.4 | 20.76 | 20.15 | **20.44** | 0.3067 | 1.501 |
| Selenium | 77 | 19.81 | 20.62 | 20.84 | **20.42** | 0.5404 | 2.646 |
| Selenium | 78 | 20.6 | 19.77 | 20.25 | **20.2** | 0.4179 | 2.068 |
| Selenium | 82 | 19.46 | 19.81 | 20.55 | **19.94** | 0.5553 | 2.785 |
| Silver | 107 | 19.51 | 19.38 | 19.44 | **19.44** | 0.0678 | 0.3486 |
| Silver | 109 | 19.89 | 19.73 | 19.81 | **19.81** | 0.0815 | 0.4116 |
| Thallium | 203 | 20.1 | 19.98 | 20.07 | **20.05** | 0.0623 | 0.3105 |
| Thallium | 205 | 20.13 | 20.25 | 20.2 | **20.19** | 0.0647 | 0.3204 |
| Uranium | 238 | 19.87 | 19.96 | 20.17 | **20** | 0.1578 | 0.789 |
| Vanadium | 51 | 20.53 | 20.18 | 19.91 | **20.21** | 0.311 | 1.539 |
| Zinc | 66 | 31.24 | 30.66 | 31.15 | **31.01** | 0.311 | 1.003 |
| Zinc | 67 | 30.01 | 30.28 | 30.65 | **30.32** | 0.3238 | 1.068 |
| Zinc | 68 | 31.39 | 30.52 | 31.32 | **31.08** | 0.4866 | 1.566 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.974 | 0.985 | 1.012 | **0.974** | n/a | n/a |
| Scandium | 45 | 1.004 | 1.046 | 1.033 | **1.004** | n/a | n/a |
| Gallium | 71 | 0.995 | 1.021 | 1.047 | **0.995** | n/a | n/a |
| Rhodium | 103 | 0.988 | 1.007 | 1.016 | **0.988** | n/a | n/a |
| Indium | 115 | 1.006 | 1.018 | 1.031 | **1.006** | n/a | n/a |
| Lutetium | 175 | 1.014 | 1.013 | 1.023 | **1.014** | n/a | n/a |
| Thorium | 232 | 1.005 | 1.005 | 1.019 | **1.005** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | LCSW K109283 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:00 | | | | | |
| Aluminum | 27 | 21.07 | 20.88 | 21.01 | **20.99** | 0.0962 | 0.4586 |
| Antimony | 121 | 21.25 | 21.22 | 21.26 | **21.25** | 0.0226 | 0.1064 |
| Antimony | 123 | 21.47 | 21.35 | 21.59 | **21.47** | 0.1189 | 0.5536 |
| Arsenic | 75 | 20.85 | 21.21 | 21.01 | **21.02** | 0.1776 | 0.8449 |
| Barium | 135 | 20.24 | 20.42 | 20.45 | **20.37** | 0.1107 | 0.5432 |
| Barium | 137 | 20.16 | 20.35 | 20.64 | **20.38** | 0.2441 | 1.198 |
| Barium | 138 | 20.43 | 20.55 | 20.53 | **20.51** | 0.0623 | 0.3039 |
| Beryllium | 9 | 21.34 | 21.11 | 20.83 | **21.09** | 0.254 | 1.204 |
| Cadmium | 111 | 21.11 | 21.27 | 21.22 | **21.2** | 0.0808 | 0.381 |
| Cadmium | 114 | 21.19 | 21.32 | 21.42 | **21.31** | 0.1178 | 0.5527 |
| Chromium | 52 | 21.16 | 21.29 | 21.13 | **21.19** | 0.086 | 0.4056 |
| Chromium | 53 | 20.86 | 21.23 | 21.05 | **21.05** | 0.1839 | 0.8737 |
| Cobalt | 59 | 21.16 | 20.44 | 21.07 | **20.89** | 0.3911 | 1.872 |
| Copper | 63 | 20.9 | 21.23 | 20.71 | **20.95** | 0.2631 | 1.256 |
| Copper | 65 | 20.9 | 20.81 | 21.19 | **20.97** | 0.1992 | 0.9498 |
| Lead | 206 | 22.81 | 22.55 | 22.95 | **22.77** | 0.204 | 0.8957 |
| Lead | 207 | 19.53 | 19.42 | 19.65 | **19.53** | 0.1123 | 0.5749 |
| Lead | 208 | 20.82 | 20.55 | 20.78 | **20.71** | 0.1455 | 0.7025 |
| Manganese | 55 | 20.69 | 21.04 | 20.76 | **20.83** | 0.185 | 0.8881 |
| Molybdenum | 95 | 20.85 | 21.04 | 20.77 | **20.89** | 0.1401 | 0.671 |
| Molybdenum | 97 | 20.61 | 20.88 | 20.99 | **20.83** | 0.1957 | 0.9395 |
| Molybdenum | 98 | 20.71 | 20.86 | 20.6 | **20.73** | 0.1299 | 0.6266 |
| Nickel | 60 | 21.38 | 21.13 | 20.98 | **21.16** | 0.2005 | 0.9473 |
| Nickel | 62 | 20.78 | 20.92 | 21.46 | **21.05** | 0.3571 | 1.696 |
| Selenium | 77 | 21.05 | 19.77 | 20.61 | **20.48** | 0.6529 | 3.188 |
| Selenium | 78 | 20.78 | 21.61 | 20.67 | **21.02** | 0.5148 | 2.449 |
| Selenium | 82 | 20.94 | 21.76 | 20.9 | **21.2** | 0.4829 | 2.278 |
| Silver | 107 | 19.47 | 19.63 | 19.7 | **19.6** | 0.1157 | 0.5904 |
| Silver | 109 | 19.9 | 19.97 | 20.08 | **19.98** | 0.0912 | 0.4562 |
| Thallium | 203 | 20.85 | 20.53 | 20.71 | **20.7** | 0.1628 | 0.7867 |
| Thallium | 205 | 20.94 | 20.5 | 20.78 | **20.74** | 0.2241 | 1.081 |
| Uranium | 238 | 20.92 | 20.25 | 20.88 | **20.68** | 0.3759 | 1.817 |
| Vanadium | 51 | 20.75 | 20.96 | 21.07 | **20.92** | 0.1641 | 0.7842 |
| Zinc | 66 | 21.22 | 21.23 | 21.4 | **21.28** | 0.1035 | 0.4865 |
| Zinc | 67 | 20.6 | 21.52 | 20.93 | **21.02** | 0.4634 | 2.205 |
| Zinc | 68 | 21.59 | 21.48 | 21.03 | **21.37** | 0.2935 | 1.373 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.033 | 1.032 | 1.031 | **1.033** | n/a | n/a |
| Scandium | 45 | 0.998 | 1.057 | 1.067 | **0.998** | n/a | n/a |
| Gallium | 71 | 0.991 | 1.047 | 1.054 | **0.991** | n/a | n/a |
| Rhodium | 103 | 1.009 | 1.032 | 1.03 | **1.009** | n/a | n/a |
| Indium | 115 | 1.02 | 1.038 | 1.052 | **1.02** | n/a | n/a |
| Lutetium | 175 | 1.063 | 1.057 | 1.077 | **1.063** | n/a | n/a |
| Thorium | 232 | 1.066 | 1.037 | 1.071 | **1.066** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | LCSW K109283D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:04 | | | | | |
| Aluminum | 27 | 20.59 | 20.95 | 20.42 | **20.65** | 0.2736 | 1.325 |
| Antimony | 121 | 20.89 | 21.01 | 21.09 | **21** | 0.1038 | 0.4942 |
| Antimony | 123 | 20.85 | 21.4 | 21.43 | **21.23** | 0.3286 | 1.548 |
| Arsenic | 75 | 21.09 | 20.56 | 20.89 | **20.85** | 0.266 | 1.276 |
| Barium | 135 | 19.85 | 20.26 | 20.56 | **20.22** | 0.3569 | 1.765 |
| Barium | 137 | 20.2 | 20.41 | 20.11 | **20.24** | 0.1548 | 0.7647 |
| Barium | 138 | 20.02 | 20.46 | 20.51 | **20.33** | 0.2729 | 1.343 |
| Beryllium | 9 | 21.51 | 20.66 | 20.36 | **20.84** | 0.5954 | 2.856 |
| Cadmium | 111 | 20.98 | 20.98 | 21.21 | **21.06** | 0.1332 | 0.6327 |
| Cadmium | 114 | 20.98 | 21.14 | 21.21 | **21.11** | 0.1202 | 0.5695 |
| Chromium | 52 | 20.89 | 21.16 | 21.14 | **21.07** | 0.1526 | 0.7242 |
| Chromium | 53 | 20.18 | 20.36 | 20.99 | **20.51** | 0.4277 | 2.085 |
| Cobalt | 59 | 20.62 | 20.61 | 20.42 | **20.55** | 0.1087 | 0.5291 |
| Copper | 63 | 20.85 | 21.05 | 21.08 | **21** | 0.1255 | 0.5978 |
| Copper | 65 | 20.66 | 21.1 | 20.77 | **20.84** | 0.2288 | 1.098 |
| Lead | 206 | 22.54 | 22.22 | 22.57 | **22.44** | 0.1969 | 0.8774 |
| Lead | 207 | 19.49 | 19.53 | 19.75 | **19.59** | 0.1412 | 0.7207 |
| Lead | 208 | 20.5 | 20.44 | 20.63 | **20.53** | 0.0985 | 0.4798 |
| Manganese | 55 | 20.72 | 20.99 | 20.83 | **20.85** | 0.1359 | 0.6517 |
| Molybdenum | 95 | 20.57 | 20.58 | 20.65 | **20.6** | 0.0451 | 0.2189 |
| Molybdenum | 97 | 20.52 | 20.68 | 20.76 | **20.65** | 0.1191 | 0.5765 |
| Molybdenum | 98 | 20.54 | 20.75 | 20.7 | **20.66** | 0.1091 | 0.5281 |
| Nickel | 60 | 21.14 | 21.06 | 21.3 | **21.17** | 0.1211 | 0.5722 |
| Nickel | 62 | 20.6 | 20.89 | 20.98 | **20.82** | 0.1983 | 0.9522 |
| Selenium | 77 | 20.86 | 20.8 | 20.32 | **20.66** | 0.299 | 1.447 |
| Selenium | 78 | 20.6 | 20.46 | 20.51 | **20.52** | 0.0727 | 0.3543 |
| Selenium | 82 | 21.25 | 20.63 | 20.61 | **20.83** | 0.3619 | 1.737 |
| Silver | 107 | 19.66 | 19.61 | 19.61 | **19.62** | 0.0281 | 0.1432 |
| Silver | 109 | 19.84 | 19.9 | 20 | **19.91** | 0.0794 | 0.3987 |
| Thallium | 203 | 20.53 | 20.25 | 20.69 | **20.49** | 0.2222 | 1.084 |
| Thallium | 205 | 20.54 | 20.35 | 20.68 | **20.52** | 0.1657 | 0.8076 |
| Uranium | 238 | 20.44 | 20.46 | 20.97 | **20.62** | 0.3021 | 1.465 |
| Vanadium | 51 | 21.15 | 20.84 | 21.17 | **21.05** | 0.1828 | 0.8681 |
| Zinc | 66 | 21.14 | 21.2 | 21.24 | **21.19** | 0.0489 | 0.2306 |
| Zinc | 67 | 20.71 | 20.82 | 21.05 | **20.86** | 0.1712 | 0.8206 |
| Zinc | 68 | 21.32 | 21.75 | 21.79 | **21.62** | 0.2641 | 1.221 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.026 | 1.007 | 0.997 | **1.026** | n/a | n/a |
| Scandium | 45 | 0.989 | 1.049 | 1.072 | **0.989** | n/a | n/a |
| Gallium | 71 | 0.994 | 1.049 | 1.05 | **0.994** | n/a | n/a |
| Rhodium | 103 | 1.002 | 1.025 | 1.019 | **1.002** | n/a | n/a |
| Indium | 115 | 1.027 | 1.04 | 1.033 | **1.027** | n/a | n/a |
| Lutetium | 175 | 1.049 | 1.049 | 1.045 | **1.049** | n/a | n/a |
| Thorium | 232 | 1.069 | 1.036 | 1.046 | **1.069** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K109646-001 From Bottle | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:10 | | | | | |
| Aluminum | 27 | 70.4 | 69.25 | 68.4 | **69.35** | 1 | 1.442 |
| Antimony | 121 | 0.0394 | 0.0373 | 0.0416 | **0.0394** | 0.0022 | 5.469 |
| Antimony | 123 | 0.039 | 0.0452 | 0.0415 | **0.0419** | 0.0031 | 7.433 |
| Arsenic | 75 | 0.4047 | 0.4409 | 0.4717 | **0.4391** | 0.0336 | 7.642 |
| Barium | 135 | 7.553 | 7.556 | 7.253 | **7.454** | 0.1745 | 2.341 |
| Barium | 137 | 7.594 | 7.462 | 7.494 | **7.517** | 0.0693 | 0.9216 |
| Barium | 138 | 7.469 | 7.605 | 7.454 | **7.509** | 0.0833 | 1.109 |
| Beryllium | 9 | 0.006 | 0.0051 | 0.0088 | **0.0066** | 0.0019 | 28.87 |
| Cadmium | 111 | 0.2445 | 0.2286 | 0.2452 | **0.2394** | 0.0094 | 3.926 |
| Cadmium | 114 | 0.2493 | 0.2456 | 0.243 | **0.246** | 0.0032 | 1.284 |
| Chromium | 52 | 1.248 | 1.295 | 1.283 | **1.275** | 0.0244 | 1.913 |
| Chromium | 53 | 0.3549 | 0.3304 | 0.3314 | **0.3389** | 0.0139 | 4.094 |
| Cobalt | 59 | 0.3877 | 0.3832 | 0.3978 | **0.3895** | 0.0075 | 1.917 |
| Copper | 63 | 0.9197 | 0.9383 | 0.91 | **0.9227** | 0.0144 | 1.561 |
| Copper | 65 | 0.8623 | 0.9005 | 0.8897 | **0.8842** | 0.0197 | 2.227 |
| Lead | 206 | 0.0161 | 0.0225 | 0.0231 | **0.0206** | 0.0039 | 18.83 |
| Lead | 207 | 0.017 | 0.0194 | 0.0226 | **0.0197** | 0.0028 | 14.45 |
| Lead | 208 | 0.0181 | 0.0202 | 0.0207 | **0.0197** | 0.0014 | 7.003 |
| Manganese | 55 | 33.88 | 33.89 | 33.56 | **33.78** | 0.1896 | 0.5614 |
| Molybdenum | 95 | 0.1332 | 0.1409 | 0.1467 | **0.1403** | 0.0068 | 4.838 |
| Molybdenum | 97 | 0.1444 | 0.1412 | 0.1399 | **0.1418** | 0.0023 | 1.642 |
| Molybdenum | 98 | 0.1341 | 0.1473 | 0.1492 | **0.1435** | 0.0082 | 5.744 |
| Nickel | 60 | 1.577 | 1.512 | 1.637 | **1.576** | 0.0623 | 3.957 |
| Nickel | 62 | 1.364 | 1.569 | 1.692 | **1.542** | 0.1656 | 10.74 |
| Selenium | 77 | 0.4283 | 0.1083 | 0.111 | **0.2159** | 0.1839 | 85.22 |
| Selenium | 78 | 0.4613 | 0.7003 | 1.081 | **0.7476** | 0.3127 | 41.82 |
| Selenium | 82 | 0.1842 | 0.1531 | 0.2424 | **0.1933** | 0.0453 | 23.46 |
| Silver | 107 | 0.0031 | 0.0007 | 0.0026 | **0.0021** | 0.0013 | 60.77 |
| Silver | 109 | 0.0009 | 0.0021 | 0.002 | **0.0017** | 0.0006 | 38.88 |
| Thallium | 203 | 0.0067 | 0.0068 | 0.0076 | **0.007** | 0.0005 | 7.465 |
| Thallium | 205 | 0.0056 | 0.0054 | 0.0053 | **0.0054** | 0.0001 | 2.765 |
| Uranium | 238 | 0.0294 | 0.0294 | 0.0298 | **0.0295** | 0.0002 | 0.6461 |
| Vanadium | 51 | 0.5719 | 0.5835 | 0.6073 | **0.5876** | 0.018 | 3.07 |
| Zinc | 66 | 13.27 | 13.26 | 13.71 | **13.41** | 0.2551 | 1.902 |
| Zinc | 67 | 12.74 | 12.98 | 12.62 | **12.78** | 0.1837 | 1.437 |
| Zinc | 68 | 13.21 | 13.3 | 13.44 | **13.31** | 0.1158 | 0.8699 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.044 | 1.056 | 1.072 | **1.044** | n/a | n/a |
| Scandium | 45 | 1.021 | 1.165 | 1.216 | **1.021** | n/a | n/a |
| Gallium | 71 | 1.027 | 1.165 | 1.217 | **1.027** | n/a | n/a |
| Rhodium | 103 | 1.028 | 1.079 | 1.124 | **1.028** | n/a | n/a |
| Indium | 115 | 1.036 | 1.081 | 1.089 | **1.036** | n/a | n/a |
| Lutetium | 175 | 1.05 | 1.08 | 1.081 | **1.05** | n/a | n/a |
| Thorium | 232 | 1.053 | 1.048 | 1.046 | **1.053** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-MB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:16 | | | | | |
| Aluminum | 27 | 0.5029 | 0.4715 | 0.4756 | **0.4833** | 0.0171 | 3.54 |
| Antimony | 121 | 0.0147 | 0.0069 | 0.0082 | **0.0099** | 0.0042 | 42.23 |
| Antimony | 123 | 0.0127 | 0.0104 | 0.01 | **0.0111** | 0.0015 | 13.24 |
| Arsenic | 75 | 0.0205 | 0.0132 | 0.0802 | **0.038** | 0.0367 | 96.72 |
| Barium | 135 | 0.0218 | 0.0157 | 0.0291 | **0.0222** | 0.0067 | 30.39 |
| Barium | 137 | 0.0233 | 0.0238 | 0.0239 | **0.0236** | 0.0003 | 1.39 |
| Barium | 138 | 0.0278 | 0.0264 | 0.0296 | **0.0279** | 0.0016 | 5.842 |
| Beryllium | 9 | 0.0012 | 0.0017 | 0.0018 | **0.0016** | 0.0003 | 18.73 |
| Cadmium | 111 | 0.0032 | 0.0013 | 0.0067 | **0.0038** | 0.0027 | 72.93 |
| Cadmium | 114 | 0.0031 | 0.0001 | 0.0004 | **0.0012** | 0.0016 | 137.9 |
| Chromium | 52 | -0.0348 | -0.0189 | -0.0387 | **-0.0308** | 0.0105 | 34.03 |
| Chromium | 53 | 0.0615 | 0.0464 | -0.0017 | **0.0354** | 0.033 | 93.14 |
| Cobalt | 59 | 0.0042 | 0.0059 | 0.0049 | **0.005** | 0.0009 | 17.17 |
| Copper | 63 | 0.019 | 0.0143 | 0.0208 | **0.018** | 0.0033 | 18.49 |
| Copper | 65 | 0.0139 | 0.0134 | 0.0184 | **0.0152** | 0.0027 | 17.96 |
| Lead | 206 | 0.0049 | 0.0059 | 0.0038 | **0.0049** | 0.0011 | 21.65 |
| Lead | 207 | 0.0053 | 0.0053 | 0.0089 | **0.0065** | 0.0021 | 32.53 |
| Lead | 208 | 0.0048 | 0.0067 | 0.0058 | **0.0058** | 0.001 | 16.62 |
| Manganese | 55 | 0.0103 | 0.0142 | 0.0114 | **0.012** | 0.002 | 16.83 |
| Molybdenum | 95 | 0.016 | 0.0181 | 0.0149 | **0.0163** | 0.0017 | 10.15 |
| Molybdenum | 97 | 0.0219 | 0.0183 | 0.0142 | **0.0182** | 0.0038 | 21.18 |
| Molybdenum | 98 | 0.0172 | 0.016 | 0.014 | **0.0157** | 0.0016 | 10.09 |
| Nickel | 60 | 0.0033 | -0.0075 | 0.0086 | **0.0015** | 0.0082 | 563.4 |
| Nickel | 62 | 0.144 | 0.1393 | 0.1868 | **0.1567** | 0.0262 | 16.71 |
| Selenium | 77 | -0.1763 | -0.0055 | -0.2392 | **-0.1403** | 0.1209 | 86.16 |
| Selenium | 78 | 0.5022 | 0.4679 | 0.4984 | **0.4895** | 0.0188 | 3.84 |
| Selenium | 82 | -0.1659 | 0.0055 | 0.0186 | **-0.0473** | 0.103 | 217.8 |
| Silver | 107 | 0.0007 | 0.0004 | -0.0005 | **0.0002** | 0.0006 | 302.7 |
| Silver | 109 | 0.0013 | -0.0002 | 0.0005 | **0.0005** | 0.0008 | 147.1 |
| Thallium | 203 | 0.0108 | 0.0101 | 0.0082 | **0.0097** | 0.0013 | 13.59 |
| Thallium | 205 | 0.008 | 0.0087 | 0.0088 | **0.0085** | 0.0004 | 5.196 |
| Uranium | 238 | -0.0013 | -0.0017 | -0.0023 | **-0.0017** | 0.0005 | 30.28 |
| Vanadium | 51 | -0.0167 | -0.014 | -0.011 | **-0.0139** | 0.0028 | 20.47 |
| Zinc | 66 | 0.5081 | 0.4945 | 0.5039 | **0.5021** | 0.007 | 1.388 |
| Zinc | 67 | 0.5573 | 0.5155 | 0.4875 | **0.5201** | 0.0351 | 6.748 |
| Zinc | 68 | 0.5095 | 0.4848 | 0.4819 | **0.492** | 0.0152 | 3.078 |

9/22/10

See review of new Aliquot

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.08 | 1.049 | 1.067 | **1.08** | n/a | n/a |
| Scandium | 45 | 1.086 | 1.187 | 1.197 | **1.086** | n/a | n/a |
| Gallium | 71 | 1.092 | 1.167 | 1.206 | **1.092** | n/a | n/a |
| Rhodium | 103 | 1.066 | 1.102 | 1.12 | **1.066** | n/a | n/a |
| Indium | 115 | 1.06 | 1.077 | 1.082 | **1.06** | n/a | n/a |
| Lutetium | 175 | 1.102 | 1.126 | 1.127 | **1.102** | n/a | n/a |
| Thorium | 232 | 1.071 | 1.044 | 1.061 | **1.071** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | LCSW K1009702 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:21 | | | | | |
| Aluminum | 27 | 21.51 | 21.11 | 21.2 | **21.27** | 0.2087 | 0.9812 |
| Antimony | 121 | 21.54 | 21.74 | 21.75 | **21.68** | 0.1214 | 0.56 |
| Antimony | 123 | 21.82 | 22.05 | 21.87 | **21.91** | 0.1233 | 0.5625 |
| Arsenic | 75 | 21.01 | 20.85 | 20.83 | **20.9** | 0.0966 | 0.4624 |
| Barium | 135 | 20.13 | 20.09 | 19.63 | **19.95** | 0.2774 | 1.391 |
| Barium | 137 | 20.14 | 20.44 | 20.08 | **20.22** | 0.1901 | 0.9404 |
| Barium | 138 | 20.56 | 20.56 | 20.36 | **20.5** | 0.1143 | 0.5576 |
| Beryllium | 9 | 20.32 | 20.08 | 19.89 | **20.1** | 0.2168 | 1.079 |
| Cadmium | 111 | 20.94 | 21.31 | 20.71 | **20.99** | 0.3034 | 1.446 |
| Cadmium | 114 | 21.1 | 21.16 | 21.21 | **21.15** | 0.0543 | 0.2567 |
| Chromium | 52 | 20.91 | 20.89 | 20.12 | **20.64** | 0.4516 | 2.188 |
| Chromium | 53 | 20.4 | 20.86 | 20.36 | **20.54** | 0.2753 | 1.34 |
| Cobalt | 59 | 20.38 | 20.2 | 20.07 | **20.21** | 0.1549 | 0.766 |
| Copper | 63 | 20.54 | 20.34 | 20.29 | **20.39** | 0.1302 | 0.6386 |
| Copper | 65 | 20.35 | 20.43 | 19.99 | **20.25** | 0.2325 | 1.148 |
| Lead | 206 | 22.34 | 22.34 | 22.22 | **22.3** | 0.067 | 0.3003 |
| Lead | 207 | 19.16 | 19.24 | 19.44 | **19.28** | 0.1416 | 0.7344 |
| Lead | 208 | 20.18 | 20.29 | 20.38 | **20.28** | 0.0983 | 0.4847 |
| Manganese | 55 | 20.56 | 20.97 | 20.5 | **20.68** | 0.2587 | 1.251 |
| Molybdenum | 95 | 20.68 | 20.8 | 21.16 | **20.88** | 0.2487 | 1.191 |
| Molybdenum | 97 | 20.83 | 21.02 | 21.35 | **21.07** | 0.26 | 1.234 |
| Molybdenum | 98 | 21.03 | 20.93 | 21.24 | **21.07** | 0.1604 | 0.7613 |
| Nickel | 60 | 20.89 | 20.51 | 20.75 | **20.72** | 0.1932 | 0.9326 |
| Nickel | 62 | 20.72 | 20.57 | 20.41 | **20.57** | 0.1567 | 0.7621 |
| Selenium | 77 | 19.95 | 20.87 | 20.9 | **20.58** | 0.5412 | 2.63 |
| Selenium | 78 | 21.88 | 21.25 | 21.11 | **21.41** | 0.4078 | 1.904 |
| Selenium | 82 | 19.85 | 20.44 | 20.93 | **20.41** | 0.5381 | 2.637 |
| Silver | 107 | 19.27 | 19.77 | 19.75 | **19.6** | 0.2829 | 1.443 |
| Silver | 109 | 19.6 | 19.95 | 19.59 | **19.71** | 0.2035 | 1.033 |
| Thallium | 203 | 20.38 | 20.27 | 20.56 | **20.4** | 0.1458 | 0.7145 |
| Thallium | 205 | 20.28 | 20.32 | 20.3 | **20.3** | 0.0201 | 0.0992 |
| Uranium | 238 | 20.01 | 20.49 | 20.27 | **20.26** | 0.2411 | 1.19 |
| Vanadium | 51 | 20.58 | 20.83 | 20.43 | **20.61** | 0.1995 | 0.9676 |
| Zinc | 66 | 22.2 | 22.07 | 21.71 | **21.99** | 0.2548 | 1.159 |
| Zinc | 67 | 21.03 | 21.39 | 22.09 | **21.5** | 0.5373 | 2.498 |
| Zinc | 68 | 22.51 | 21.88 | 21.7 | **22.03** | 0.4213 | 1.912 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.077 | 1.106 | 1.118 | **1.077** | n/a | n/a |
| Scandium | 45 | 1.141 | 1.267 | 1.276 | **1.141** | n/a | n/a |
| Gallium | 71 | 1.132 | 1.215 | 1.263 | **1.132** | n/a | n/a |
| Rhodium | 103 | 1.059 | 1.118 | 1.158 | **1.059** | n/a | n/a |
| Indium | 115 | 1.052 | 1.105 | 1.117 | **1.052** | n/a | n/a |
| Lutetium | 175 | 1.077 | 1.106 | 1.15 | **1.077** | n/a | n/a |
| Thorium | 232 | 1.031 | 1.055 | 1.083 | **1.031** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCV4 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:25 | | | | | |
| Aluminum | 27 | 24.12 | 24.07 | 24.52 | **24.24** | 0.2489 | 1.027 |
| Antimony | 121 | 25.26 | 25.43 | 25.42 | **25.37** | 0.0999 | 0.3937 |
| Antimony | 123 | 25.4 | 25.82 | 25.77 | **25.66** | 0.2324 | 0.9055 |
| Arsenic | 75 | 25.71 | 24.71 | 25.06 | **25.16** | 0.5069 | 2.015 |
| Barium | 135 | 24.71 | 24.2 | 24.37 | **24.43** | 0.2577 | 1.055 |
| Barium | 137 | 24.48 | 24.37 | 24.24 | **24.36** | 0.1209 | 0.4963 |
| Barium | 138 | 24.49 | 24.71 | 24.81 | **24.67** | 0.1615 | 0.6548 |
| Beryllium | 9 | 25.08 | 24.69 | 25.5 | **25.09** | 0.4101 | 1.634 |
| Cadmium | 111 | 24.89 | 25.45 | 25.27 | **25.2** | 0.2851 | 1.131 |
| Cadmium | 114 | 24.75 | 25.32 | 25.37 | **25.15** | 0.3453 | 1.373 |
| Chromium | 52 | 24.67 | 24.92 | 24.6 | **24.73** | 0.1692 | 0.6842 |
| Chromium | 53 | 24.17 | 24.68 | 24.7 | **24.52** | 0.2976 | 1.214 |
| Cobalt | 59 | 24.53 | 24.6 | 23.89 | **24.34** | 0.3876 | 1.592 |
| Copper | 63 | 24.89 | 24.25 | 24.28 | **24.47** | 0.3609 | 1.475 |
| Copper | 65 | 24.6 | 24.31 | 23.95 | **24.28** | 0.324 | 1.334 |
| Lead | 206 | 24.67 | 24.39 | 24.31 | **24.46** | 0.1925 | 0.7873 |
| Lead | 207 | 24.38 | 24.24 | 24.36 | **24.33** | 0.0775 | 0.3187 |
| Lead | 208 | 24.27 | 24.38 | 24.28 | **24.31** | 0.0613 | 0.2523 |
| Manganese | 55 | 24.9 | 24.81 | 24.43 | **24.71** | 0.2491 | 1.008 |
| Molybdenum | 95 | 25.42 | 25.4 | 25.19 | **25.34** | 0.1238 | 0.4885 |
| Molybdenum | 97 | 25.05 | 25.23 | 25.02 | **25.1** | 0.111 | 0.4423 |
| Molybdenum | 98 | 25.03 | 25.49 | 25.2 | **25.24** | 0.2316 | 0.9174 |
| Nickel | 60 | 24.48 | 24.7 | 24.59 | **24.59** | 0.107 | 0.4353 |
| Nickel | 62 | 24.93 | 24.7 | 23.91 | **24.51** | 0.5358 | 2.186 |
| Selenium | 77 | 24.8 | 24.4 | 24.26 | **24.48** | 0.28 | 1.144 |
| Selenium | 78 | 25.08 | 25.53 | 24.7 | **25.1** | 0.4144 | 1.651 |
| Selenium | 82 | 24.23 | 24 | 24.41 | **24.21** | 0.2046 | 0.8449 |
| Silver | 107 | 24.35 | 24.61 | 24.36 | **24.44** | 0.1482 | 0.6065 |
| Silver | 109 | 24.54 | 24.85 | 24.6 | **24.66** | 0.1675 | 0.679 |
| Thallium | 203 | 24.47 | 24.81 | 24.27 | **24.51** | 0.2752 | 1.123 |
| Thallium | 205 | 24.37 | 24.66 | 24.47 | **24.5** | 0.149 | 0.6081 |
| Uranium | 238 | 24.22 | 24.25 | 23.76 | **24.08** | 0.2753 | 1.143 |
| Vanadium | 51 | 25.05 | 25.22 | 24.62 | **24.96** | 0.3055 | 1.224 |
| Zinc | 66 | 25.44 | 24.75 | 24.81 | **25** | 0.3821 | 1.529 |
| Zinc | 67 | 24.8 | 24.5 | 24 | **24.43** | 0.4038 | 1.653 |
| Zinc | 68 | 25.74 | 25.47 | 25.07 | **25.43** | 0.3346 | 1.316 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.161 | 1.107 | 1.116 | **1.161** | n/a | n/a |
| Scandium | 45 | 1.148 | 1.202 | 1.18 | **1.148** | n/a | n/a |
| Gallium | 71 | 1.148 | 1.167 | 1.16 | **1.148** | n/a | n/a |
| Rhodium | 103 | 1.08 | 1.107 | 1.098 | **1.08** | n/a | n/a |
| Indium | 115 | 1.069 | 1.097 | 1.094 | **1.069** | n/a | n/a |
| Lutetium | 175 | 1.127 | 1.115 | 1.125 | **1.127** | n/a | n/a |
| Thorium | 232 | 1.064 | 1.078 | 1.076 | **1.064** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCB4 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:37 | | | | | |
| Aluminum | 27 | 0.3336 | 0.3119 | 0.3201 | **0.3219** | 0.011 | 3.406 |
| Antimony | 121 | 0.0299 | 0.0222 | 0.0211 | **0.0244** | 0.0048 | 19.54 |
| Antimony | 123 | 0.0309 | 0.0271 | 0.0195 | **0.0258** | 0.0058 | 22.58 |
| Arsenic | 75 | 0.0092 | -0.0132 | 0.031 | **0.009** | 0.0221 | 245 |
| Barium | 135 | 0.0107 | 0.008 | 0.0163 | **0.0116** | 0.0042 | 36.51 |
| Barium | 137 | 0.0074 | 0.013 | 0.0062 | **0.0089** | 0.0036 | 40.93 |
| Barium | 138 | 0.0116 | 0.0157 | 0.0114 | **0.0129** | 0.0025 | 19 |
| Beryllium | 9 | 0.0033 | 0.0046 | 0.0058 | **0.0046** | 0.0013 | 28 |
| Cadmium | 111 | 0.0111 | 0.0037 | 0.0037 | **0.0062** | 0.0043 | 69.63 |
| Cadmium | 114 | 0.0065 | 0.0057 | 0.0051 | **0.0058** | 0.0007 | 12.35 |
| Chromium | 52 | -0.0405 | -0.0592 | -0.0449 | **-0.0482** | 0.0098 | 20.3 |
| Chromium | 53 | 0.0747 | 0.0237 | -0.0058 | **0.0309** | 0.0407 | 132 |
| Cobalt | 59 | 0.0054 | 0.0067 | 0.0059 | **0.006** | 0.0007 | 11.08 |
| Copper | 63 | 0.0114 | 0.0186 | 0.019 | **0.0163** | 0.0043 | 26.2 |
| Copper | 65 | 0.0155 | 0.0171 | 0.0133 | **0.0153** | 0.0019 | 12.41 |
| Lead | 206 | 0.0072 | 0.0087 | 0.0059 | **0.0073** | 0.0014 | 19.76 |
| Lead | 207 | 0.0061 | 0.008 | 0.0047 | **0.0063** | 0.0016 | 26.37 |
| Lead | 208 | 0.0075 | 0.0074 | 0.0066 | **0.0072** | 0.0005 | 7.465 |
| Manganese | 55 | 0.0058 | 0.0112 | 0.0086 | **0.0085** | 0.0027 | 31.22 |
| Molybdenum | 95 | 0.0193 | 0.0161 | 0.0193 | **0.0182** | 0.0019 | 10.21 |
| Molybdenum | 97 | 0.0156 | 0.0155 | 0.0206 | **0.0173** | 0.0029 | 17 |
| Molybdenum | 98 | 0.0203 | 0.0167 | 0.0151 | **0.0174** | 0.0026 | 15.1 |
| Nickel | 60 | 0.0077 | 0.0089 | 0.0173 | **0.0113** | 0.0052 | 46.16 |
| Nickel | 62 | -0.0164 | 0.0573 | -0.0136 | **0.0091** | 0.0418 | 458.3 |
| Selenium | 77 | -0.0584 | 0.0031 | -0.143 | **-0.0661** | 0.0733 | 111 |
| Selenium | 78 | -0.593 | -0.4136 | -0.517 | **-0.5079** | 0.09 | 17.73 |
| Selenium | 82 | -0.0788 | -0.0755 | -0.0401 | **-0.0648** | 0.0214 | 33.09 |
| Silver | 107 | 0.0063 | 0.0056 | 0.0053 | **0.0057** | 0.0005 | 9.114 |
| Silver | 109 | 0.0067 | 0.0055 | 0.005 | **0.0057** | 0.0009 | 15.3 |
| Thallium | 203 | 0.0043 | 0.0086 | 0.0053 | **0.0061** | 0.0023 | 37.26 |
| Thallium | 205 | 0.0082 | 0.0061 | 0.007 | **0.0071** | 0.0011 | 14.91 |
| Uranium | 238 | 0.0027 | 0.0033 | 0.003 | **0.003** | 0.0003 | 10.22 |
| Vanadium | 51 | -0.0048 | -0.0146 | -0.0031 | **-0.0075** | 0.0062 | 82.92 |
| Zinc | 66 | 0.0526 | 0.0318 | 0.0433 | **0.0426** | 0.0104 | 24.51 |
| Zinc | 67 | 0.0638 | 0.067 | 0.0208 | **0.0506** | 0.0258 | 51.01 |
| Zinc | 68 | 0.046 | 0.0411 | 0.0408 | **0.0426** | 0.0029 | 6.887 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.994 | 0.961 | 0.974 | **0.994** | n/a | n/a |
| Scandium | 45 | 0.912 | 0.993 | 1.046 | **0.912** | n/a | n/a |
| Gallium | 71 | 0.929 | 1.016 | 1.032 | **0.929** | n/a | n/a |
| Rhodium | 103 | 0.968 | 1.012 | 1.006 | **0.968** | n/a | n/a |
| Indium | 115 | 0.993 | 1.007 | 1.011 | **0.993** | n/a | n/a |
| Lutetium | 175 | 1.056 | 1.042 | 1.037 | **1.056** | n/a | n/a |
| Thorium | 232 | 1.048 | 1.014 | 1.028 | **1.048** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-MB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:41 | | | | | |
| Aluminum | 27 | 0.496 | 0.4856 | 0.4934 | **0.4917** | 0.0054 | 1.101 |
| Antimony | 121 | 0.0093 | 0.0118 | 0.0138 | **0.0117** | 0.0022 | 19.03 |
| Antimony | 123 | 0.0105 | 0.0108 | 0.0154 | **0.0123** | 0.0028 | 22.55 |
| Arsenic | 75 | 0.0252 | 0.0301 | 0.0863 | **0.0472** | 0.0339 | 71.9 |
| Barium | 135 | 0.0207 | 0.0147 | 0.0186 | **0.018** | 0.003 | 16.76 |
| Barium | 137 | 0.0209 | 0.0205 | 0.0303 | **0.0239** | 0.0056 | 23.26 |
| Barium | 138 | 0.0257 | 0.0248 | 0.0311 | **0.0272** | 0.0034 | 12.39 |
| Beryllium | 9 | 0.003 | 0.0013 | 0.0046 | **0.003** | 0.0016 | 54.84 |
| Cadmium | 111 | 0.0033 | 0.0077 | 0.0099 | **0.0069** | 0.0034 | 48.4 |
| Cadmium | 114 | 0.0022 | 0.0012 | 0.0057 | **0.003** | 0.0024 | 77.96 |
| Chromium | 52 | -0.0274 | -0.0628 | -0.0163 | **-0.0355** | 0.0243 | 68.31 |
| Chromium | 53 | 0.0126 | 0.016 | 0.0274 | **0.0187** | 0.0077 | 41.37 |
| Cobalt | 59 | 0.005 | 0.0086 | 0.0088 | **0.0075** | 0.0021 | 28.13 |
| Copper | 63 | 0.0162 | 0.0202 | 0.0299 | **0.0221** | 0.007 | 31.9 |
| Copper | 65 | 0.0207 | 0.0352 | 0.0354 | **0.0305** | 0.0085 | 27.76 |
| Lead | 206 | 0.0045 | 0.0079 | 0.0075 | **0.0066** | 0.0019 | 28.54 |
| Lead | 207 | 0.0096 | 0.0067 | 0.0119 | **0.0094** | 0.0026 | 27.9 |
| Lead | 208 | 0.0059 | 0.0073 | 0.0094 | **0.0075** | 0.0017 | 22.91 |
| Manganese | 55 | 0.0253 | 0.0261 | 0.0245 | **0.0253** | 0.0008 | 3.154 |
| Molybdenum | 95 | 0.0089 | 0.0193 | 0.0182 | **0.0155** | 0.0057 | 36.9 |
| Molybdenum | 97 | 0.0051 | 0.0217 | 0.016 | **0.0143** | 0.0084 | 59.04 |
| Molybdenum | 98 | 0.0163 | 0.0176 | 0.0155 | **0.0165** | 0.0011 | 6.648 |
| Nickel | 60 | 0.0243 | 0.0227 | 0.0165 | **0.0212** | 0.0041 | 19.47 |
| Nickel | 62 | 0.0369 | 0.1356 | 0.0171 | **0.0632** | 0.0635 | 100.5 |
| Selenium | 77 | -0.0548 | -0.1405 | -0.1234 | **-0.1063** | 0.0454 | 42.71 |
| Selenium | 78 | -0.1833 | -0.0784 | -0.2343 | **-0.1653** | 0.0795 | 48.09 |
| Selenium | 82 | 0.0206 | -0.07 | 0.1611 | **0.0372** | 0.1164 | 312.7 |
| Silver | 107 | 0.0022 | 0.0037 | 0.0056 | **0.0038** | 0.0017 | 45.15 |
| Silver | 109 | 0.0022 | 0.0041 | 0.0053 | **0.0038** | 0.0016 | 40.48 |
| Thallium | 203 | 0.0116 | 0.0128 | 0.0141 | **0.0128** | 0.0012 | 9.534 |
| Thallium | 205 | 0.009 | 0.011 | 0.012 | **0.0107** | 0.0015 | 14.14 |
| Uranium | 238 | -0.0013 | 0.0005 | 0.0025 | **0.0006** | 0.0019 | 328.8 |
| Vanadium | 51 | -0.0054 | -0.024 | -0.0107 | **-0.0134** | 0.0095 | 71.42 |
| Zinc | 66 | 0.4144 | 0.4369 | 0.4206 | **0.424** | 0.0116 | 2.743 |
| Zinc | 67 | 0.3771 | 0.3774 | 0.2685 | **0.341** | 0.0628 | 18.41 |
| Zinc | 68 | 0.4072 | 0.4232 | 0.4122 | **0.4142** | 0.0082 | 1.978 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.019 | 1.009 | 1.009 | **1.019** | n/a | n/a |
| Scandium | 45 | 1.018 | 1.08 | 1.1 | **1.018** | n/a | n/a |
| Gallium | 71 | 1.03 | 1.099 | 1.097 | **1.03** | n/a | n/a |
| Rhodium | 103 | 1.01 | 1.056 | 1.067 | **1.01** | n/a | n/a |
| Indium | 115 | 1.022 | 1.044 | 1.054 | **1.022** | n/a | n/a |
| Lutetium | 175 | 1.046 | 1.052 | 1.066 | **1.046** | n/a | n/a |
| Thorium | 232 | 1.061 | 1.055 | 1.049 | **1.061** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-003 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 11:56 | | | | | |
| Aluminum | 27 | 3.726 | 3.645 | 3.72 | **3.697** | 0.0453 | 1.226 |
| Antimony | 121 | 0.1075 | 0.1016 | 0.1068 | **0.1053** | 0.0032 | 3.082 |
| Antimony | 123 | 0.0973 | 0.1072 | 0.1039 | **0.1028** | 0.005 | 4.91 |
| Arsenic | 75 | 0.5856 | 0.4958 | 0.6022 | **0.5612** | 0.0572 | 10.2 |
| Barium | 135 | 157.5 | 157.1 | 159.1 | **157.9** | 1.074 | 0.6803 |
| Barium | 137 | 161.5 | 160.6 | 161.2 | **161.1** | 0.4687 | 0.2909 |
| Barium | 138 | 176.3 | 176.7 | 176.1 | **176.4** | 0.3105 | 0.1761 |
| Beryllium | 9 | 0.0193 | 0.0151 | 0.0168 | **0.017** | 0.0021 | 12.48 |
| Cadmium | 111 | 0.008 | 0.0091 | 0.0054 | **0.0075** | 0.0019 | 25.26 |
| Cadmium | 114 | 0.002 | 0.0055 | 0.0056 | **0.0044** | 0.0021 | 46.89 |
| Chromium | 52 | 0.1789 | 0.1693 | 0.1913 | **0.1798** | 0.011 | 6.122 |
| Chromium | 53 | 0.4656 | 0.5272 | 0.5261 | **0.5063** | 0.0352 | 6.961 |
| Cobalt | 59 | 2.433 | 2.444 | 2.454 | **2.444** | 0.0106 | 0.4336 |
| Copper | 63 | 1.788 | 1.81 | 1.862 | **1.82** | 0.0381 | 2.094 |
| Copper | 65 | 0.7469 | 0.7949 | 0.7391 | **0.7603** | 0.0302 | 3.971 |
| Lead | 206 | 0.0764 | 0.0612 | 0.0702 | **0.0693** | 0.0076 | 11.02 |
| Lead | 207 | 0.0678 | 0.0577 | 0.0649 | **0.0635** | 0.0052 | 8.167 |
| Lead | 208 | 0.0706 | 0.0652 | 0.0682 | **0.068** | 0.0027 | 4.006 |
| Manganese | 55 | 876.2 | 877 | 876.9 | **876.7** | 0.4385 | 0.05 |
| Molybdenum | 95 | 0.5799 | 0.6094 | 0.5932 | **0.5942** | 0.0148 | 2.487 |
| Molybdenum | 97 | 0.56 | 0.587 | 0.5652 | **0.5707** | 0.0143 | 2.509 |
| Molybdenum | 98 | 0.5691 | 0.5801 | 0.5753 | **0.5748** | 0.0055 | 0.9596 |
| Nickel | 60 | 3.226 | 3.268 | 3.284 | **3.259** | 0.0303 | 0.9291 |
| Nickel | 62 | 3 | 2.993 | 3.016 | **3.003** | 0.0114 | 0.3796 |
| Selenium | 77 | 0.5591 | 0.5015 | 0.461 | **0.5072** | 0.0493 | 9.721 |
| Selenium | 78 | 1.213 | 1.037 | 0.9408 | **1.064** | 0.138 | 12.97 |
| Selenium | 82 | 0.1705 | -0.3283 | 0.1719 | **0.0047** | 0.2884 | 6130 |
| Silver | 107 | 0.0053 | 0.0069 | 0.0048 | **0.0056** | 0.0011 | 19.35 |
| Silver | 109 | 0.0029 | 0.0033 | 0.0049 | **0.0037** | 0.0011 | 28.34 |
| Thallium | 203 | 0.016 | 0.0146 | 0.0151 | **0.0152** | 0.0007 | 4.631 |
| Thallium | 205 | 0.0169 | 0.0158 | 0.0138 | **0.0155** | 0.0016 | 10.02 |
| Uranium | 238 | 0.7549 | 0.7671 | 0.7626 | **0.7615** | 0.0062 | 0.8147 |
| Vanadium | 51 | 0.2175 | 0.1815 | 0.1918 | **0.1969** | 0.0185 | 9.399 |
| Zinc | 66 | 3.216 | 3.176 | 3.178 | **3.19** | 0.0223 | 0.6995 |
| Zinc | 67 | 10.99 | 11.26 | 10.83 | **11.03** | 0.2145 | 1.945 |
| Zinc | 68 | 9.461 | 9.366 | 9.475 | **9.434** | 0.0595 | 0.6305 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.191 | 1.158 | 1.15 | **1.191** | n/a | n/a |
| Scandium | 45 | 1.255 | 1.378 | 1.359 | **1.255** | n/a | n/a |
| Gallium | 71 | 1.307 | 1.414 | 1.42 | **1.307** | n/a | n/a |
| Rhodium | 103 | 1.285 | 1.329 | 1.33 | **1.285** | n/a | n/a |
| Indium | 115 | 1.223 | 1.262 | 1.268 | **1.223** | n/a | n/a |
| Lutetium | 175 | 1.142 | 1.133 | 1.122 | **1.142** | n/a | n/a |
| Thorium | 232 | 1.063 | 1.076 | 1.09 | **1.063** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-003D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 12:00 | | | | | |
| Aluminum | 27 | 3.246 | 3.067 | 3.122 | **3.145** | 0.0918 | 2.919 |
| Antimony | 121 | 0.1076 | 0.0981 | 0.0998 | **0.1018** | 0.0051 | 4.988 |
| Antimony | 123 | 0.1014 | 0.1039 | 0.1122 | **0.1058** | 0.0057 | 5.349 |
| Arsenic | 75 | 0.6128 | 0.5671 | 0.6595 | **0.6131** | 0.0462 | 7.536 |
| Barium | 135 | 156.7 | 158.4 | 156.7 | **157.3** | 1.001 | 0.6367 |
| Barium | 137 | 160.2 | 159.8 | 159.2 | **159.7** | 0.4952 | 0.31 |
| Barium | 138 | 177.2 | 176.2 | 173.8 | **175.8** | 1.737 | 0.9883 |
| Beryllium | 9 | 0.0166 | 0.0158 | 0.0211 | **0.0178** | 0.0028 | 15.85 |
| Cadmium | 111 | 0.006 | 0.0105 | 0.0031 | **0.0065** | 0.0037 | 57.28 |
| Cadmium | 114 | 0.0013 | 0.0059 | 0.0023 | **0.0032** | 0.0024 | 76.66 |
| Chromium | 52 | 0.213 | 0.1934 | 0.2096 | **0.2053** | 0.0105 | 5.106 |
| Chromium | 53 | 0.5823 | 0.509 | 0.5595 | **0.5503** | 0.0375 | 6.815 |
| Cobalt | 59 | 2.487 | 2.418 | 2.459 | **2.455** | 0.0343 | 1.399 |
| Copper | 63 | 1.858 | 1.806 | 1.826 | **1.83** | 0.0263 | 1.434 |
| Copper | 65 | 0.787 | 0.7361 | 0.767 | **0.7634** | 0.0257 | 3.363 |
| Lead | 206 | 0.0743 | 0.0749 | 0.0657 | **0.0716** | 0.0052 | 7.225 |
| Lead | 207 | 0.0744 | 0.0744 | 0.0657 | **0.0715** | 0.005 | 7.013 |
| Lead | 208 | 0.0686 | 0.0692 | 0.0675 | **0.0684** | 0.0009 | 1.268 |
| Manganese | 55 | 883.4 | 857.3 | 876.9 | **872.5** | 13.58 | 1.556 |
| Molybdenum | 95 | 0.6075 | 0.6038 | 0.6049 | **0.6054** | 0.0019 | 0.3118 |
| Molybdenum | 97 | 0.589 | 0.5864 | 0.5742 | **0.5832** | 0.0079 | 1.359 |
| Molybdenum | 98 | 0.5939 | 0.5848 | 0.5616 | **0.5801** | 0.0167 | 2.873 |
| Nickel | 60 | 3.278 | 3.248 | 3.289 | **3.272** | 0.0213 | 0.6496 |
| Nickel | 62 | 2.738 | 2.865 | 3.058 | **2.887** | 0.1613 | 5.588 |
| Selenium | 77 | 0.4191 | 0.5123 | 0.3422 | **0.4245** | 0.0852 | 20.07 |
| Selenium | 78 | 1.152 | 0.8649 | 0.3605 | **0.7926** | 0.4009 | 50.58 |
| Selenium | 82 | 0.1196 | 0.0404 | 0.412 | **0.1906** | 0.1957 | 102.7 |
| Silver | 107 | 0.0044 | 0.0036 | 0.0053 | **0.0044** | 0.0008 | 18.43 |
| Silver | 109 | 0.004 | 0.0025 | 0.0015 | **0.0027** | 0.0013 | 46.77 |
| Thallium | 203 | 0.0178 | 0.0163 | 0.0104 | **0.0149** | 0.0039 | 26.6 |
| Thallium | 205 | 0.0158 | 0.0171 | 0.0146 | **0.0158** | 0.0012 | 7.902 |
| Uranium | 238 | 0.7705 | 0.7902 | 0.7844 | **0.7817** | 0.0101 | 1.291 |
| Vanadium | 51 | 0.204 | 0.2067 | 0.1918 | **0.2008** | 0.0079 | 3.94 |
| Zinc | 66 | 3.226 | 3.166 | 3.147 | **3.18** | 0.0408 | 1.284 |
| Zinc | 67 | 11.72 | 10.86 | 11.07 | **11.22** | 0.4461 | 3.977 |
| Zinc | 68 | 9.738 | 9.336 | 9.371 | **9.482** | 0.2226 | 2.348 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.221 | 1.173 | 1.177 | **1.221** | n/a | n/a |
| Scandium | 45 | 1.277 | 1.307 | 1.35 | **1.277** | n/a | n/a |
| Gallium | 71 | 1.353 | 1.38 | 1.419 | **1.353** | n/a | n/a |
| Rhodium | 103 | 1.323 | 1.333 | 1.348 | **1.323** | n/a | n/a |
| Indium | 115 | 1.269 | 1.271 | 1.287 | **1.269** | n/a | n/a |
| Lutetium | 175 | 1.175 | 1.196 | 1.193 | **1.175** | n/a | n/a |
| Thorium | 232 | 1.145 | 1.148 | 1.168 | **1.145** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-003 1/5L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 12:06 | | | | | |
| Aluminum | 27 | 1.122 | 1.129 | 1.102 | **1.118** | 0.0142 | 1.267 |
| Antimony | 121 | 0.0151 | 0.0121 | 0.0138 | **0.0137** | 0.0015 | 10.88 |
| Antimony | 123 | 0.01 | 0.0124 | 0.0157 | **0.0127** | 0.0029 | 22.54 |
| Arsenic | 75 | 0.1561 | 0.1455 | 0.2974 | **0.1996** | 0.0848 | 42.48 |
| Barium | 135 | 31.02 | 31 | 31.44 | **31.15** | 0.249 | 0.7992 |
| Barium | 137 | 30.99 | 31.16 | 31.41 | **31.19** | 0.209 | 0.6702 |
| Barium | 138 | 31.41 | 31.56 | 31.93 | **31.63** | 0.2664 | 0.8422 |
| Beryllium | 9 | 0.009 | 0.0024 | 0.0035 | **0.005** | 0.0035 | 70.81 |
| Cadmium | 111 | 0.0012 | 0.0048 | 0.0072 | **0.0044** | 0.003 | 68.69 |
| Cadmium | 114 | 0.0005 | 0.0026 | 0.003 | **0.0021** | 0.0013 | 65.01 |
| Chromium | 52 | -0.0485 | -0.0486 | -0.0641 | **-0.0537** | 0.009 | 16.76 |
| Chromium | 53 | 0.2511 | 0.2306 | 0.214 | **0.2319** | 0.0186 | 8.008 |
| Cobalt | 59 | 0.5131 | 0.5132 | 0.5133 | **0.5132** | 0.0001 | 0.0206 |
| Copper | 63 | 0.3843 | 0.3899 | 0.389 | **0.3877** | 0.003 | 0.7831 |
| Copper | 65 | 0.1671 | 0.1747 | 0.1589 | **0.1669** | 0.0079 | 4.717 |
| Lead | 206 | 0.0179 | 0.0203 | 0.0174 | **0.0185** | 0.0015 | 8.355 |
| Lead | 207 | 0.0243 | 0.0212 | 0.0176 | **0.021** | 0.0033 | 15.81 |
| Lead | 208 | 0.0201 | 0.0196 | 0.0182 | **0.0193** | 0.001 | 5.096 |
| Manganese | 55 | 168.5 | 168.3 | 169.1 | **168.6** | 0.4256 | 0.2524 |
| Molybdenum | 95 | 0.1225 | 0.104 | 0.1037 | **0.1101** | 0.0108 | 9.769 |
| Molybdenum | 97 | 0.1107 | 0.1099 | 0.112 | **0.1109** | 0.001 | 0.9414 |
| Molybdenum | 98 | 0.1005 | 0.1003 | 0.1168 | **0.1059** | 0.0095 | 8.949 |
| Nickel | 60 | 0.6712 | 0.6751 | 0.662 | **0.6695** | 0.0067 | 1.008 |
| Nickel | 62 | 0.7629 | 0.8421 | 0.8279 | **0.811** | 0.0422 | 5.207 |
| Selenium | 77 | -0.0292 | -0.1227 | -0.1872 | **-0.113** | 0.0795 | 70.28 |
| Selenium | 78 | 0.2356 | 0.4903 | 0.4705 | **0.3988** | 0.1417 | 35.52 |
| Selenium | 82 | -0.0364 | -0.1365 | 0.3886 | **0.0719** | 0.2788 | 387.9 |
| Silver | 107 | 0.0002 | -0.0012 | -0.0009 | **-0.0006** | 0.0007 | 110.2 |
| Silver | 109 | -0.0005 | -0.0004 | -0.0002 | **-0.0004** | 0.0001 | 33.19 |
| Thallium | 203 | 0.0045 | 0.0036 | 0.0047 | **0.0042** | 0.0006 | 13.19 |
| Thallium | 205 | 0.0041 | 0.0037 | 0.0032 | **0.0037** | 0.0005 | 12.45 |
| Uranium | 238 | 0.1561 | 0.1506 | 0.1571 | **0.1546** | 0.0035 | 2.286 |
| Vanadium | 51 | 0.071 | 0.0534 | 0.0453 | **0.0566** | 0.0131 | 23.19 |
| Zinc | 66 | 1.129 | 1.237 | 1.157 | **1.174** | 0.0558 | 4.75 |
| Zinc | 67 | 2.756 | 2.828 | 2.667 | **2.75** | 0.0806 | 2.931 |
| Zinc | 68 | 2.466 | 2.463 | 2.329 | **2.42** | 0.0781 | 3.229 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.196 | 1.164 | 1.134 | **1.196** | n/a | n/a |
| Scandium | 45 | 1.196 | 1.284 | 1.312 | **1.196** | n/a | n/a |
| Gallium | 71 | 1.163 | 1.264 | 1.278 | **1.163** | n/a | n/a |
| Rhodium | 103 | 1.156 | 1.2 | 1.207 | **1.156** | n/a | n/a |
| Indium | 115 | 1.133 | 1.153 | 1.167 | **1.133** | n/a | n/a |
| Lutetium | 175 | 1.139 | 1.132 | 1.124 | **1.139** | n/a | n/a |
| Thorium | 232 | 1.152 | 1.11 | 1.106 | **1.152** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-003 +20A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 12:10 | | | | | |
| Aluminum | 27 | 20.92 | 20.61 | 20.91 | **20.81** | 0.1783 | 0.8567 |
| Antimony | 121 | 20.59 | 20.87 | 20.8 | **20.75** | 0.1498 | 0.7219 |
| Antimony | 123 | 20.85 | 21.12 | 21.29 | **21.08** | 0.2239 | 1.062 |
| Arsenic | 75 | 20.87 | 20.84 | 21.61 | **21.11** | 0.437 | 2.07 |
| Barium | 135 | 170.9 | 171.2 | 169.5 | **170.5** | 0.8955 | 0.5251 |
| Barium | 137 | 170.4 | 171.6 | 170.8 | **170.9** | 0.6464 | 0.3782 |
| Barium | 138 | 180.7 | 180.7 | 169.9 | **177.1** | 6.224 | 3.515 |
| Beryllium | 9 | 19.72 | 19 | 18.92 | **19.21** | 0.4388 | 2.284 |
| Cadmium | 111 | 19.84 | 20.09 | 19.92 | **19.95** | 0.1282 | 0.6425 |
| Cadmium | 114 | 19.76 | 19.76 | 19.51 | **19.68** | 0.1426 | 0.7249 |
| Chromium | 52 | 19.96 | 20.08 | 19.89 | **19.98** | 0.0976 | 0.4884 |
| Chromium | 53 | 20.08 | 19.83 | 20.3 | **20.07** | 0.235 | 1.171 |
| Cobalt | 59 | 20.87 | 21 | 20.91 | **20.93** | 0.0678 | 0.3237 |
| Copper | 63 | 19.76 | 19.68 | 19.72 | **19.72** | 0.0386 | 0.1955 |
| Copper | 65 | 18.89 | 18.58 | 18.77 | **18.75** | 0.1559 | 0.8315 |
| Lead | 206 | 18.07 | 18.34 | 18.13 | **18.18** | 0.143 | 0.7865 |
| Lead | 207 | 18.18 | 18.41 | 18.22 | **18.27** | 0.1208 | 0.6612 |
| Lead | 208 | 18.17 | 18.37 | 18.07 | **18.21** | 0.1502 | 0.8249 |
| Manganese | 55 | 826.9 | 817.9 | 812.5 | **819.1** | 7.271 | 0.8877 |
| Molybdenum | 95 | 22.11 | 22.23 | 22.25 | **22.2** | 0.0719 | 0.3241 |
| Molybdenum | 97 | 22.11 | 22.14 | 21.86 | **22.04** | 0.1534 | 0.696 |
| Molybdenum | 98 | 22.05 | 22.26 | 21.74 | **22.01** | 0.2603 | 1.182 |
| Nickel | 60 | 21.6 | 21.4 | 21.48 | **21.5** | 0.0991 | 0.4611 |
| Nickel | 62 | 21.21 | 21.25 | 20.61 | **21.03** | 0.3562 | 1.694 |
| Selenium | 77 | 21.08 | 20.87 | 19.69 | **20.55** | 0.749 | 3.645 |
| Selenium | 78 | 21.27 | 20.52 | 20.44 | **20.75** | 0.4574 | 2.205 |
| Selenium | 82 | 19.27 | 19.88 | 19.78 | **19.64** | 0.3289 | 1.674 |
| Silver | 107 | 18.57 | 18.53 | 18.55 | **18.55** | 0.0217 | 0.1168 |
| Silver | 109 | 18.62 | 18.88 | 18.7 | **18.73** | 0.1325 | 0.7074 |
| Thallium | 203 | 18.62 | 18.71 | 18.78 | **18.7** | 0.0758 | 0.4053 |
| Thallium | 205 | 18.52 | 18.61 | 18.52 | **18.55** | 0.0515 | 0.2777 |
| Uranium | 238 | 19.42 | 19.72 | 19.8 | **19.65** | 0.1997 | 1.016 |
| Vanadium | 51 | 20.38 | 20.43 | 20.48 | **20.43** | 0.0513 | 0.2512 |
| Zinc | 66 | 23.85 | 23.36 | 23.82 | **23.68** | 0.2732 | 1.154 |
| Zinc | 67 | 30.03 | 30.32 | 30.17 | **30.17** | 0.1485 | 0.4923 |
| Zinc | 68 | 29.7 | 29.73 | 29.69 | **29.7** | 0.0209 | 0.0703 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.196 | 1.163 | 1.178 | **1.196** | n/a | n/a |
| Scandium | 45 | 1.287 | 1.377 | 1.401 | **1.287** | n/a | n/a |
| Gallium | 71 | 1.311 | 1.384 | 1.409 | **1.311** | n/a | n/a |
| Rhodium | 103 | 1.27 | 1.316 | 1.311 | **1.27** | n/a | n/a |
| Indium | 115 | 1.216 | 1.239 | 1.239 | **1.216** | n/a | n/a |
| Lutetium | 175 | 1.162 | 1.173 | 1.166 | **1.162** | n/a | n/a |
| Thorium | 232 | 1.076 | 1.079 | 1.087 | **1.076** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1009702-003S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 12:15 | | | | | |
| Aluminum | 27 | 20.01 | 19.77 | 19.85 | **19.87** | 0.1231 | 0.6196 |
| Antimony | 121 | 21.31 | 21.26 | 21.66 | **21.41** | 0.2143 | 1.001 |
| Antimony | 123 | 21.63 | 21.53 | 21.66 | **21.61** | 0.0679 | 0.3141 |
| Arsenic | 75 | 21.24 | 21.68 | 20.58 | **21.16** | 0.5537 | 2.616 |
| Barium | 135 | 175.4 | 174.3 | 175.3 | **175** | 0.5824 | 0.3328 |
| Barium | 137 | 174.4 | 175.6 | 177 | **175.7** | 1.303 | 0.7419 |
| Barium | 138 | 187 | 185.4 | 188.2 | **186.9** | 1.394 | 0.746 |
| Beryllium | 9 | 18.72 | 18.32 | 17.97 | **18.34** | 0.3761 | 2.051 |
| Cadmium | 111 | 19.93 | 20.05 | 20.3 | **20.09** | 0.1872 | 0.9317 |
| Cadmium | 114 | 19.61 | 19.77 | 19.87 | **19.75** | 0.1312 | 0.6644 |
| Chromium | 52 | 19.7 | 19.94 | 19.62 | **19.75** | 0.1645 | 0.8329 |
| Chromium | 53 | 19.6 | 19.99 | 20.15 | **19.91** | 0.2807 | 1.41 |
| Cobalt | 59 | 20.75 | 20.55 | 20.67 | **20.66** | 0.0984 | 0.4765 |
| Copper | 63 | 19.88 | 19.58 | 19.63 | **19.69** | 0.1611 | 0.818 |
| Copper | 65 | 18.64 | 18.66 | 18.77 | **18.69** | 0.0677 | 0.362 |
| Lead | 206 | 19.98 | 20.15 | 20.2 | **20.11** | 0.1148 | 0.5707 |
| Lead | 207 | 17.12 | 17.33 | 17.52 | **17.32** | 0.2042 | 1.179 |
| Lead | 208 | 18.14 | 18.09 | 18.4 | **18.21** | 0.1662 | 0.9128 |
| Manganese | 55 | 859.7 | 865.3 | 862.2 | **862.4** | 2.816 | 0.3265 |
| Molybdenum | 95 | 22.17 | 22.25 | 22.2 | **22.21** | 0.0403 | 0.1815 |
| Molybdenum | 97 | 22.04 | 22.25 | 22.28 | **22.19** | 0.1348 | 0.6073 |
| Molybdenum | 98 | 22.19 | 22.37 | 22.42 | **22.32** | 0.1227 | 0.5496 |
| Nickel | 60 | 21.32 | 21.26 | 21.54 | **21.38** | 0.1467 | 0.6863 |
| Nickel | 62 | 21.73 | 21.57 | 21.07 | **21.46** | 0.3467 | 1.616 |
| Selenium | 77 | 19.59 | 19.86 | 20.18 | **19.88** | 0.2995 | 1.507 |
| Selenium | 78 | 20.93 | 20.43 | 20.35 | **20.57** | 0.3167 | 1.539 |
| Selenium | 82 | 19.95 | 20.12 | 19.17 | **19.75** | 0.5064 | 2.564 |
| Silver | 107 | 18.54 | 18.59 | 18.61 | **18.58** | 0.0397 | 0.2138 |
| Silver | 109 | 18.67 | 18.65 | 18.79 | **18.7** | 0.0773 | 0.4135 |
| Thallium | 203 | 18.6 | 18.22 | 18.58 | **18.46** | 0.2128 | 1.153 |
| Thallium | 205 | 18.5 | 18.24 | 18.7 | **18.48** | 0.2304 | 1.247 |
| Uranium | 238 | 19.89 | 20.01 | 20.4 | **20.1** | 0.2656 | 1.321 |
| Vanadium | 51 | 20.78 | 20.64 | 19.96 | **20.46** | 0.4344 | 2.123 |
| Zinc | 66 | 22.34 | 22.3 | 22.15 | **22.26** | 0.1002 | 0.4503 |
| Zinc | 67 | 29.33 | 29.94 | 29.45 | **29.57** | 0.3218 | 1.088 |
| Zinc | 68 | 28.44 | 28.58 | 28.31 | **28.44** | 0.1347 | 0.4736 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 1.208 | 1.198 | 1.211 | **1.208** | n/a | n/a |
| Scandium | 45 | 1.349 | 1.456 | 1.494 | **1.349** | n/a | n/a |
| Gallium | 71 | 1.353 | 1.465 | 1.488 | **1.353** | n/a | n/a |
| Rhodium | 103 | 1.287 | 1.356 | 1.37 | **1.287** | n/a | n/a |
| Indium | 115 | 1.221 | 1.253 | 1.286 | **1.221** | n/a | n/a |
| Lutetium | 175 | 1.163 | 1.175 | 1.207 | **1.163** | n/a | n/a |
| Thorium | 232 | 1.098 | 1.095 | 1.143 | **1.098** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1008857-003 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 12:55 | | | | | |
| Aluminum | 27 | 1.386 | 1.347 | 1.371 | **1.368** | 0.0199 | 1.451 |
| Antimony | 121 | 0 | 0.0012 | -0.0006 | **0.0002** | 0.0009 | 472.3 |
| Antimony | 123 | 0.0022 | 0.0015 | 0.0056 | **0.0031** | 0.0022 | 71.37 |
| Arsenic | 75 | -0.0257 | -0.0173 | 0.0738 | **0.0103** | 0.0552 | 538.2 |
| Barium | 135 | 0.2488 | 0.2403 | 0.2165 | **0.2352** | 0.0167 | 7.115 |
| Barium | 137 | 0.2398 | 0.2614 | 0.2317 | **0.2443** | 0.0153 | 6.267 |
| Barium | 138 | 0.2482 | 0.2449 | 0.2389 | **0.244** | 0.0047 | 1.94 |
| Beryllium | 9 | 0.0008 | 0.0126 | 0.0077 | **0.007** | 0.0059 | 83.64 |
| Cadmium | 111 | 0.0132 | 0.0161 | 0.0149 | **0.0148** | 0.0015 | 10.07 |
| Cadmium | 114 | 0.0052 | 0.0126 | 0.0122 | **0.01** | 0.0042 | 41.48 |
| Chromium | 52 | 0.2127 | 0.1371 | 0.1473 | **0.1657** | 0.041 | 24.74 |
| Chromium | 53 | 0.3336 | 0.224 | 0.2443 | **0.2673** | 0.0583 | 21.82 |
| Cobalt | 59 | 0.0094 | 0.0095 | 0.0106 | **0.0098** | 0.0007 | 6.698 |
| Copper | 63 | 0.0785 | 0.074 | 0.0786 | **0.077** | 0.0026 | 3.391 |
| Copper | 65 | 0.0862 | 0.0835 | 0.0726 | **0.0808** | 0.0072 | 8.88 |
| Lead | 206 | 0.0161 | 0.0162 | 0.0129 | **0.0151** | 0.0019 | 12.64 |
| Lead | 207 | 0.0131 | 0.0147 | 0.0194 | **0.0157** | 0.0032 | 20.6 |
| Lead | 208 | 0.0152 | 0.0152 | 0.0156 | **0.0153** | 0.0002 | 1.393 |
| Manganese | 55 | 0.2406 | 0.2356 | 0.2365 | **0.2376** | 0.0027 | 1.116 |
| Molybdenum | 95 | 0.0151 | 0.0167 | 0.02 | **0.0173** | 0.0025 | 14.52 |
| Molybdenum | 97 | 0.019 | 0.0174 | 0.0136 | **0.0167** | 0.0027 | 16.48 |
| Molybdenum | 98 | 0.0192 | 0.0225 | 0.0181 | **0.02** | 0.0023 | 11.55 |
| Nickel | 60 | 0.0836 | 0.0789 | 0.0812 | **0.0812** | 0.0024 | 2.928 |
| Nickel | 62 | -0.0378 | -0.1128 | -0.0753 | **-0.0753** | 0.0375 | 49.8 |
| Selenium | 77 | -0.0059 | 0.0326 | -0.0813 | **-0.0182** | 0.058 | 318.6 |
| Selenium | 78 | -0.9114 | -1.332 | -1.607 | **-1.283** | 0.3502 | 27.29 |
| Selenium | 82 | -0.1751 | -0.1003 | 0.1119 | **-0.0545** | 0.1489 | 273.1 |
| Silver | 107 | 0.0039 | 0.0026 | 0.0053 | **0.0039** | 0.0014 | 34.57 |
| Silver | 109 | 0.0029 | 0.0028 | 0.0047 | **0.0035** | 0.0011 | 30.57 |
| Thallium | 203 | 0.0106 | 0.012 | 0.0118 | **0.0115** | 0.0007 | 6.205 |
| Thallium | 205 | 0.0123 | 0.0111 | 0.0115 | **0.0116** | 0.0006 | 5.251 |
| Uranium | 238 | 0.0009 | 0.0002 | -0.0001 | **0.0003** | 0.0005 | 148.9 |
| Vanadium | 51 | 0.0283 | 0.0133 | 0.0002 | **0.0139** | 0.0141 | 101 |
| Zinc | 66 | 1.061 | 1.005 | 1.005 | **1.024** | 0.0324 | 3.161 |
| Zinc | 67 | 1.093 | 0.963 | 0.9145 | **0.9901** | 0.0921 | 9.302 |
| Zinc | 68 | 0.9845 | 0.979 | 0.9715 | **0.9783** | 0.0066 | 0.6703 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.951 | 0.952 | 0.965 | **0.951** | n/a | n/a |
| Scandium | 45 | 0.859 | 0.894 | 0.933 | **0.859** | n/a | n/a |
| Gallium | 71 | 0.903 | 0.92 | 0.937 | **0.903** | n/a | n/a |
| Rhodium | 103 | 0.966 | 0.97 | 0.993 | **0.966** | n/a | n/a |
| Indium | 115 | 1.006 | 1.007 | 1.014 | **1.006** | n/a | n/a |
| Lutetium | 175 | 1.031 | 1.001 | 1.015 | **1.031** | n/a | n/a |
| Thorium | 232 | 1.056 | 1.009 | 1.012 | **1.056** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1008857-003 1/5L | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 13:07 | | | | | |
| Aluminum | 27 | 0.4499 | 0.424 | 0.4155 | **0.4298** | 0.0179 | 4.171 |
| Antimony | 121 | -0.007 | -0.0063 | -0.0062 | **-0.0065** | 0.0004 | 6.507 |
| Antimony | 123 | -0.0057 | -0.0071 | -0.0059 | **-0.0062** | 0.0008 | 12.1 |
| Arsenic | 75 | 0.0425 | -0.0219 | 0.0179 | **0.0128** | 0.0325 | 253.3 |
| Barium | 135 | 0.0558 | 0.0543 | 0.0429 | **0.051** | 0.007 | 13.78 |
| Barium | 137 | 0.0587 | 0.0653 | 0.0645 | **0.0628** | 0.0036 | 5.695 |
| Barium | 138 | 0.0631 | 0.0577 | 0.0641 | **0.0616** | 0.0034 | 5.602 |
| Beryllium | 9 | 0.0064 | -0.0007 | 0.0042 | **0.0033** | 0.0036 | 110.3 |
| Cadmium | 111 | 0.0075 | 0.0076 | 0.0052 | **0.0067** | 0.0014 | 20.37 |
| Cadmium | 114 | 0.0038 | 0.006 | 0.0035 | **0.0045** | 0.0014 | 30.73 |
| Chromium | 52 | 0.0514 | 0.0217 | -0.0086 | **0.0215** | 0.03 | 139.8 |
| Chromium | 53 | 0.1752 | 0.1342 | 0.0782 | **0.1292** | 0.0487 | 37.67 |
| Cobalt | 59 | 0.0031 | 0.0032 | 0.0039 | **0.0034** | 0.0004 | 12.35 |
| Copper | 63 | 0.0257 | 0.0265 | 0.0187 | **0.0236** | 0.0043 | 18.15 |
| Copper | 65 | 0.0213 | 0.0179 | 0.0242 | **0.0211** | 0.0032 | 15.06 |
| Lead | 206 | 0.0044 | 0.0065 | 0.0087 | **0.0065** | 0.0021 | 32.57 |
| Lead | 207 | 0.0034 | 0.0066 | 0.0075 | **0.0058** | 0.0021 | 36.97 |
| Lead | 208 | 0.0042 | 0.0062 | 0.0073 | **0.0059** | 0.0015 | 26.13 |
| Manganese | 55 | 0.0986 | 0.0936 | 0.0928 | **0.095** | 0.0031 | 3.286 |
| Molybdenum | 95 | 0.0088 | 0.0089 | 0.005 | **0.0076** | 0.0022 | 29.17 |
| Molybdenum | 97 | 0.0054 | 0.0047 | 0.003 | **0.0044** | 0.0012 | 27.33 |
| Molybdenum | 98 | 0.0107 | 0.0088 | 0.008 | **0.0092** | 0.0013 | 14.72 |
| Nickel | 60 | 0.0128 | 0.0095 | 0.0064 | **0.0095** | 0.0032 | 33.52 |
| Nickel | 62 | -0.1372 | -0.1124 | -0.1274 | **-0.1257** | 0.0125 | 9.944 |
| Selenium | 77 | -0.0764 | -0.0073 | -0.1387 | **-0.0741** | 0.0657 | 88.64 |
| Selenium | 78 | -0.8142 | -1.34 | -1.109 | **-1.088** | 0.2636 | 24.23 |
| Selenium | 82 | 0.0493 | -0.0915 | -0.0954 | **-0.0459** | 0.0825 | 179.8 |
| Silver | 107 | 0.003 | 0.0029 | 0.0024 | **0.0028** | 0.0003 | 11.35 |
| Silver | 109 | 0.0016 | 0.0011 | 0.0021 | **0.0016** | 0.0005 | 29.94 |
| Thallium | 203 | 0.0064 | 0.006 | 0.0058 | **0.0061** | 0.0003 | 5.671 |
| Thallium | 205 | 0.0065 | 0.0056 | 0.0056 | **0.0059** | 0.0005 | 8.853 |
| Uranium | 238 | -0.0006 | 0.0003 | -0.0001 | **-0.0001** | 0.0004 | 387.8 |
| Vanadium | 51 | 0.0132 | -0.0041 | -0.0041 | **0.0017** | 0.01 | 597.4 |
| Zinc | 66 | 0.2645 | 0.2355 | 0.242 | **0.2474** | 0.0152 | 6.145 |
| Zinc | 67 | 0.2764 | 0.2203 | 0.1814 | **0.226** | 0.0478 | 21.12 |
| Zinc | 68 | 0.2482 | 0.226 | 0.2667 | **0.247** | 0.0203 | 8.237 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.989 | 0.934 | 0.927 | **0.989** | n/a | n/a |
| Scandium | 45 | 0.889 | 0.938 | 0.965 | **0.889** | n/a | n/a |
| Gallium | 71 | 0.92 | 0.94 | 0.984 | **0.92** | n/a | n/a |
| Rhodium | 103 | 0.975 | 0.981 | 0.982 | **0.975** | n/a | n/a |
| Indium | 115 | 1.014 | 1.018 | 1.022 | **1.014** | n/a | n/a |
| Lutetium | 175 | 1.036 | 1.019 | 0.995 | **1.036** | n/a | n/a |
| Thorium | 232 | 1.097 | 1.043 | 1.048 | **1.097** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | K1008857-003 +20A | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 13:12 | | | | | |
| Aluminum | 27 | 21.67 | 21.81 | 21.59 | **21.69** | 0.1123 | 0.5177 |
| Antimony | 121 | 20.6 | 20.47 | 20.45 | **20.51** | 0.0806 | 0.3931 |
| Antimony | 123 | 20.83 | 20.89 | 20.5 | **20.74** | 0.2101 | 1.013 |
| Arsenic | 75 | 20.27 | 20.2 | 20.3 | **20.26** | 0.0545 | 0.2691 |
| Barium | 135 | 20.71 | 20.22 | 19.89 | **20.28** | 0.4153 | 2.048 |
| Barium | 137 | 20.41 | 20.33 | 20.01 | **20.25** | 0.2137 | 1.055 |
| Barium | 138 | 20.74 | 20.57 | 20.18 | **20.5** | 0.2897 | 1.413 |
| Beryllium | 9 | 21.28 | 21.07 | 20.86 | **21.07** | 0.2111 | 1.002 |
| Cadmium | 111 | 21.03 | 20.78 | 20.55 | **20.78** | 0.2389 | 1.149 |
| Cadmium | 114 | 20.85 | 20.9 | 20.62 | **20.79** | 0.1475 | 0.7094 |
| Chromium | 52 | 21.06 | 21.19 | 21.07 | **21.11** | 0.0743 | 0.3523 |
| Chromium | 53 | 20.9 | 20.99 | 20.86 | **20.92** | 0.0681 | 0.3257 |
| Cobalt | 59 | 21.07 | 21.12 | 20.95 | **21.04** | 0.0873 | 0.4147 |
| Copper | 63 | 21.21 | 20.97 | 20.99 | **21.05** | 0.132 | 0.6269 |
| Copper | 65 | 20.69 | 20.94 | 20.84 | **20.82** | 0.1227 | 0.5891 |
| Lead | 206 | 22.28 | 22.33 | 21.95 | **22.18** | 0.2068 | 0.932 |
| Lead | 207 | 18.99 | 19.35 | 18.83 | **19.06** | 0.2679 | 1.406 |
| Lead | 208 | 20.17 | 20.43 | 19.97 | **20.19** | 0.226 | 1.119 |
| Manganese | 55 | 20.88 | 20.97 | 20.66 | **20.84** | 0.1602 | 0.7691 |
| Molybdenum | 95 | 20.38 | 20.34 | 20.11 | **20.28** | 0.1442 | 0.7109 |
| Molybdenum | 97 | 20.31 | 20.33 | 20.04 | **20.23** | 0.1648 | 0.8148 |
| Molybdenum | 98 | 20.55 | 20.39 | 20.15 | **20.36** | 0.1998 | 0.981 |
| Nickel | 60 | 21.28 | 21.55 | 20.85 | **21.22** | 0.355 | 1.672 |
| Nickel | 62 | 21.33 | 20.95 | 21.1 | **21.13** | 0.1884 | 0.8919 |
| Selenium | 77 | 20.22 | 21.2 | 20.28 | **20.57** | 0.5468 | 2.658 |
| Selenium | 78 | 18.79 | 19.52 | 19.76 | **19.36** | 0.5055 | 2.612 |
| Selenium | 82 | 20.79 | 20.32 | 20.08 | **20.39** | 0.3609 | 1.77 |
| Silver | 107 | 19.65 | 19.68 | 19.34 | **19.56** | 0.1902 | 0.9723 |
| Silver | 109 | 19.87 | 19.77 | 19.68 | **19.77** | 0.095 | 0.4805 |
| Thallium | 203 | 19.73 | 20.32 | 20.27 | **20.11** | 0.3269 | 1.626 |
| Thallium | 205 | 19.81 | 20.16 | 20.3 | **20.09** | 0.2506 | 1.247 |
| Uranium | 238 | 19.79 | 20.24 | 20.11 | **20.05** | 0.2299 | 1.147 |
| Vanadium | 51 | 21.09 | 20.91 | 20.73 | **20.91** | 0.1774 | 0.8483 |
| Zinc | 66 | 21.37 | 21.57 | 21.36 | **21.43** | 0.116 | 0.541 |
| Zinc | 67 | 20.99 | 21.22 | 20.72 | **20.97** | 0.251 | 1.197 |
| Zinc | 68 | 21.36 | 21.65 | 21.33 | **21.45** | 0.1778 | 0.8289 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.901 | 0.906 | 0.909 | **0.901** | n/a | n/a |
| Scandium | 45 | 0.901 | 0.931 | 0.953 | **0.901** | n/a | n/a |
| Gallium | 71 | 0.902 | 0.927 | 0.954 | **0.902** | n/a | n/a |
| Rhodium | 103 | 0.949 | 0.956 | 0.957 | **0.949** | n/a | n/a |
| Indium | 115 | 0.982 | 0.975 | 0.98 | **0.982** | n/a | n/a |
| Lutetium | 175 | 0.98 | 0.963 | 0.964 | **0.98** | n/a | n/a |
| Thorium | 232 | 0.953 | 0.953 | 0.957 | **0.953** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCV5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 13:16 | | | | | |
| Aluminum | 27 | 26.4 | 25.93 | 25.95 | **26.1** | 0.2653 | 1.017 |
| Antimony | 121 | 24.26 | 24.43 | 24.49 | **24.39** | 0.1189 | 0.4875 |
| Antimony | 123 | 24.43 | 24.54 | 24.78 | **24.58** | 0.1818 | 0.7398 |
| Arsenic | 75 | 25.02 | 24.74 | 25.25 | **25** | 0.2583 | 1.033 |
| Barium | 135 | 24.34 | 24.22 | 24.56 | **24.37** | 0.1689 | 0.693 |
| Barium | 137 | 24.34 | 24.09 | 24.21 | **24.21** | 0.1221 | 0.5041 |
| Barium | 138 | 24.87 | 24.62 | 24.91 | **24.8** | 0.162 | 0.653 |
| Beryllium | 9 | 25.15 | 24.74 | 24.7 | **24.86** | 0.2464 | 0.991 |
| Cadmium | 111 | 25.05 | 24.74 | 25.12 | **24.97** | 0.2001 | 0.8011 |
| Cadmium | 114 | 25.01 | 24.69 | 24.87 | **24.86** | 0.1636 | 0.6581 |
| Chromium | 52 | 25.3 | 24.64 | 25.24 | **25.06** | 0.364 | 1.452 |
| Chromium | 53 | 25.31 | 24.89 | 24.56 | **24.92** | 0.3772 | 1.513 |
| Cobalt | 59 | 25.57 | 24.94 | 25.35 | **25.29** | 0.3167 | 1.252 |
| Copper | 63 | 25.09 | 25.09 | 25.15 | **25.11** | 0.0331 | 0.1319 |
| Copper | 65 | 25.47 | 24.86 | 25.09 | **25.14** | 0.3098 | 1.232 |
| Lead | 206 | 24.7 | 24.59 | 24.69 | **24.66** | 0.0596 | 0.2415 |
| Lead | 207 | 24.77 | 24.68 | 24.76 | **24.74** | 0.0489 | 0.1978 |
| Lead | 208 | 24.63 | 24.39 | 24.6 | **24.54** | 0.13 | 0.5298 |
| Manganese | 55 | 25.38 | 24.67 | 25.35 | **25.13** | 0.4036 | 1.606 |
| Molybdenum | 95 | 24.83 | 24.14 | 24.75 | **24.57** | 0.3802 | 1.547 |
| Molybdenum | 97 | 24.94 | 24.44 | 24.58 | **24.65** | 0.2612 | 1.06 |
| Molybdenum | 98 | 24.99 | 24.58 | 24.83 | **24.8** | 0.204 | 0.8225 |
| Nickel | 60 | 25.76 | 25.12 | 25.47 | **25.45** | 0.3201 | 1.258 |
| Nickel | 62 | 25.46 | 24.76 | 24.98 | **25.07** | 0.36 | 1.436 |
| Selenium | 77 | 25.61 | 24.95 | 24.79 | **25.12** | 0.4354 | 1.733 |
| Selenium | 78 | 23.74 | 24.28 | 23.98 | **24** | 0.2735 | 1.139 |
| Selenium | 82 | 25.14 | 24.81 | 26.07 | **25.34** | 0.654 | 2.581 |
| Silver | 107 | 24.76 | 24.49 | 24.62 | **24.62** | 0.135 | 0.5481 |
| Silver | 109 | 25.07 | 24.83 | 25.07 | **24.99** | 0.1382 | 0.5532 |
| Thallium | 203 | 24.75 | 24.9 | 25.15 | **24.93** | 0.2023 | 0.8112 |
| Thallium | 205 | 24.87 | 24.81 | 25.21 | **24.96** | 0.2158 | 0.8644 |
| Uranium | 238 | 24.68 | 24.91 | 25.26 | **24.95** | 0.2886 | 1.157 |
| Vanadium | 51 | 25.58 | 24.84 | 25.48 | **25.3** | 0.3992 | 1.578 |
| Zinc | 66 | 25.39 | 24.89 | 25.06 | **25.11** | 0.2561 | 1.02 |
| Zinc | 67 | 25.14 | 24.6 | 25.42 | **25.05** | 0.4176 | 1.667 |
| Zinc | 68 | 25.22 | 24.91 | 25.27 | **25.14** | 0.193 | 0.7677 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.922 | 0.912 | 0.91 | **0.922** | n/a | n/a |
| Scandium | 45 | 0.923 | 0.945 | 0.953 | **0.923** | n/a | n/a |
| Gallium | 71 | 0.915 | 0.937 | 0.958 | **0.915** | n/a | n/a |
| Rhodium | 103 | 0.963 | 0.965 | 0.971 | **0.963** | n/a | n/a |
| Indium | 115 | 0.976 | 0.98 | 0.988 | **0.976** | n/a | n/a |
| Lutetium | 175 | 0.983 | 0.962 | 0.979 | **0.983** | n/a | n/a |
| Thorium | 232 | 0.98 | 0.976 | 0.984 | **0.98** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 09-22-10A
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #217652

| Sample Name: | | CCB5 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 9/22/10 13:26 | | | | | |
| Aluminum | 27 | 0.3338 | 0.3153 | 0.3043 | **0.3178** | 0.0149 | 4.685 |
| Antimony | 121 | 0.0266 | 0.0249 | 0.02 | **0.0238** | 0.0034 | 14.23 |
| Antimony | 123 | 0.0286 | 0.0274 | 0.0235 | **0.0265** | 0.0026 | 9.984 |
| Arsenic | 75 | 0.096 | -0.0348 | -0.0501 | **0.0037** | 0.0803 | 2182 |
| Barium | 135 | 0.0076 | 0.0085 | 0.0073 | **0.0078** | 0.0007 | 8.439 |
| Barium | 137 | 0.0126 | 0.0101 | 0.0122 | **0.0117** | 0.0014 | 11.65 |
| Barium | 138 | 0.0121 | 0.0148 | 0.0109 | **0.0126** | 0.002 | 15.85 |
| Beryllium | 9 | 0.0045 | 0.0066 | 0.003 | **0.0047** | 0.0018 | 37.59 |
| Cadmium | 111 | 0.0028 | 0.008 | 0.0023 | **0.0043** | 0.0032 | 73.14 |
| Cadmium | 114 | 0.0075 | 0.0068 | 0.0055 | **0.0066** | 0.001 | 15.68 |
| Chromium | 52 | 0.0038 | -0.0017 | -0.0076 | **-0.0019** | 0.0057 | 308.7 |
| Chromium | 53 | 0.1483 | 0.0754 | 0.0768 | **0.1002** | 0.0417 | 41.6 |
| Cobalt | 59 | 0.0056 | 0.006 | 0.0067 | **0.0061** | 0.0005 | 9.002 |
| Copper | 63 | 0.0128 | 0.0196 | 0.0232 | **0.0185** | 0.0053 | 28.49 |
| Copper | 65 | 0.0201 | 0.0243 | 0.0192 | **0.0212** | 0.0027 | 12.81 |
| Lead | 206 | 0.009 | 0.0072 | 0.005 | **0.0071** | 0.002 | 28.12 |
| Lead | 207 | 0.0101 | 0.0101 | 0.0107 | **0.0103** | 0.0004 | 3.718 |
| Lead | 208 | 0.0097 | 0.0091 | 0.0081 | **0.009** | 0.0008 | 8.625 |
| Manganese | 55 | 0.0142 | 0.0148 | 0.0114 | **0.0135** | 0.0018 | 13.52 |
| Molybdenum | 95 | 0.0194 | 0.0177 | 0.0167 | **0.0179** | 0.0014 | 7.545 |
| Molybdenum | 97 | 0.0149 | 0.0091 | 0.0156 | **0.0132** | 0.0036 | 26.95 |
| Molybdenum | 98 | 0.0211 | 0.0191 | 0.016 | **0.0187** | 0.0025 | 13.59 |
| Nickel | 60 | 0.0083 | 0.0138 | 0.0037 | **0.0086** | 0.005 | 58.51 |
| Nickel | 62 | -0.1059 | -0.0323 | -0.1214 | **-0.0865** | 0.0476 | 55.05 |
| Selenium | 77 | -0.01 | -0.078 | -0.1012 | **-0.0631** | 0.0474 | 75.13 |
| Selenium | 78 | -1.203 | -1.075 | -1.677 | **-1.319** | 0.3171 | 24.05 |
| Selenium | 82 | 0.2917 | -0.2251 | -0.2951 | **-0.0762** | 0.3205 | 420.8 |
| Silver | 107 | 0.0071 | 0.0059 | 0.005 | **0.006** | 0.001 | 17.25 |
| Silver | 109 | 0.0063 | 0.0057 | 0.0066 | **0.0062** | 0.0004 | 7.149 |
| Thallium | 203 | 0.0071 | 0.0079 | 0.0078 | **0.0076** | 0.0005 | 6.171 |
| Thallium | 205 | 0.0086 | 0.0082 | 0.0073 | **0.008** | 0.0007 | 8.619 |
| Uranium | 238 | 0.0036 | 0.0046 | 0.0044 | **0.0042** | 0.0005 | 12.16 |
| Vanadium | 51 | 0.0094 | 0.0049 | -0.0082 | **0.002** | 0.0091 | 451.9 |
| Zinc | 66 | 0.0628 | 0.0719 | 0.0555 | **0.0634** | 0.0082 | 12.94 |
| Zinc | 67 | 0.1027 | 0.0945 | 0.0671 | **0.0881** | 0.0187 | 21.17 |
| Zinc | 68 | 0.0799 | 0.0838 | 0.0582 | **0.074** | 0.0138 | 18.67 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lithium | 6 | 0.96 | 0.917 | 0.905 | **0.96** | n/a | n/a |
| Scandium | 45 | 0.898 | 0.924 | 0.955 | **0.898** | n/a | n/a |
| Gallium | 71 | 0.932 | 0.931 | 0.961 | **0.932** | n/a | n/a |
| Rhodium | 103 | 0.99 | 0.978 | 0.993 | **0.99** | n/a | n/a |
| Indium | 115 | 1.031 | 1.014 | 1.024 | **1.031** | n/a | n/a |
| Lutetium | 175 | 1.067 | 1.007 | 1.015 | **1.067** | n/a | n/a |
| Thorium | 232 | 1.092 | 1.037 | 1.049 | **1.092** | n/a | n/a |

# Butyltins

# Organic Analysis:
# Butyltins (as cation)

## Summary Package

### Sample and QC Results

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857

## Cover Page - Organic Analysis Data Package
## Butyltins (as cation)

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| LPRC07C | K1008857-001 | 08/16/2010 | 08/18/2010 |
| LPRC13A | K1008857-002 | 08/16/2010 | 08/18/2010 |
| LPRC07C-RB | K1008857-003 | 08/16/2010 | 08/18/2010 |

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

Signature: _____ Name: Agilla Komanski

Date: 9/17/10 Title: SVOC Manager

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Water | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/09/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC07C-RB | **Units:** | ug/L |
| **Lab Code:** | K1008857-003 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F008.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.050 | U | 0.050 | 0.038 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.050 | U | 0.050 | 0.012 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.050 | U | 0.050 | 0.0073 | |
| 78763-54-9 | n-Butyltin Cation | 0.050 | U | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 70 | 24-142 | 09/09/10 | Acceptable |

**Comments:**

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/08/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KWG1009459-3 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F005.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.050 | U | 0.050 | 0.038 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.050 | U | 0.050 | 0.012 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.050 | U | 0.050 | 0.0073 | |
| 78763-54-9 | n-Butyltin Cation | 0.050 | U | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 58 | 24-142 | 09/08/10 | Acceptable |

**Comments:**

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC07C | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-001 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F021.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.16 g | **Column2:** | RTX-35 |
| **% Solids:** | 66.1 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 1.6 | U | 1.6 | 0.67 | |
| **36643-28-4** | Tri-n-butyltin Cation | **6.4** | | 1.6 | 0.65 | |
| **14488-53-0** | Di-n-butyltin Cation | **16** | | 1.6 | 0.29 | |
| **78763-54-9** | n-Butyltin Cation | **15** | | 1.6 | 0.40 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 70 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/16/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC13A | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-002 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F022.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.04 g | **Column2:** | RTX-35 |
| **% Solids:** | 72.9 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **1.7** | | 1.4 | 0.61 | |
| **36643-28-4** | Tri-n-butyltin Cation | **0.97** | J | 1.4 | 0.59 | |
| **14488-53-0** | Di-n-butyltin Cation | **6.0** | | 1.4 | 0.27 | |
| **78763-54-9** | n-Butyltin Cation | **7.3** | P | 1.4 | 0.36 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 63 | 18-95 | 09/16/10 | Acceptable |

**Comments:**

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG1009567-4 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F014.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.44 g | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.98 | U | 0.98 | 0.44 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.98 | U | 0.98 | 0.43 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.98 | U | 0.98 | 0.19 | |
| 78763-54-9 | n-Butyltin Cation | 0.98 | U | 0.98 | 0.26 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 57 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward | **Service Request:** | K1008857 |
| **Project:** | Passaic Sediments | **Date Collected:** | NA |
| **Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 8/24/2010 |
| | | **Date Analyzed:** | 9/16/2010 |

Standard Reference Material
Butyltins

Sample Name: NRC PACS-2
Lab Code: KWG1009567-5
Test Notes:

Units: ug/Kg (ppb)

| Analyte | Prep Method | Analysis Method | Certified Value | Result | CAS Advisory Limits | Result Notes |
|---|---|---|---|---|---|---|
| Tri-n-butyltin Cation | Method | Krone | 2170 ± 260 | 944 | 650-2430 | |
| Di-n-butyltin Cation | Method | Krone | 2050 ± 130 | 574 | 615-2180 | |

| Analyte | Prep Method | Analysis Method | Information Value | Result | CAS Advisory Limits | Result Notes |
|---|---|---|---|---|---|---|
| n-Butyltin Cation | Method | Krone | 890 | 710 | 270-1150 | |

Approved By: _____ Date: 9/17/10

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Water

**Service Request:** K1008857

**Surrogate Recovery Summary**
**Butyltins (as cation)**

**Extraction Method:** EPA 3520C
**Analysis Method:** Krone

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| LPRC07C-RB | K1008857-003 | 70 |
| Method Blank | KWG1009459-3 | 58 |
| Lab Control Sample | KWG1009459-1 | 46 |
| Duplicate Lab Control Sample | KWG1009459-2 | 59 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Tri-n-propyltin 24-142

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Sediment

**Service Request:** K1008857

## Surrogate Recovery Summary
## Butyltins (as cation)

**Extraction Method:** METHOD
**Analysis Method:** Krone

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| LPRC07C | K1008857-001 | 70 |
| LPRC13A | K1008857-002 | 63 |
| Method Blank | KWG1009567-4 | 57 |
| Batch QC | K1008775-002 | 65 |
| Batch QCMS | KWG1009567-1 | 67 |
| Batch QCDMS | KWG1009567-2 | 66 |
| Lab Control Sample | KWG1009567-3 | 63 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Tri-n-propyltin 18-95

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |

## Matrix Spike/Duplicate Matrix Spike Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | ug/Kg |
| **Lab Code:** | K1008775-002 | **Basis:** | Dry |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

| | | Batch QCMS KWG1009567-1 Matrix Spike | | | Batch QCDMS KWG1009567-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 0.71 | 26.7 | 37.8 | 69 | 21.6 | 37.4 | 56 | 10-120 | 21 | 40 |
| Tri-n-butyltin Cation | ND | 19.6 | 33.5 | 59 | 22.1 | 33.3 | 66 | 10-118 | 12 | 40 |
| Di-n-butyltin Cation | ND | 19.1 | 29.0 | 66 | 23.3 | 28.8 | 81 | 10-145 | 20 | 40 |
| n-Butyltin Cation | ND | 18.6 | 23.6 | 79 | 20.9 | 23.4 | 89 | 10-126 | 11 | 40 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 - 09/09/2010 |

**Lab Control Spike/Duplicate Lab Control Spike Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Extraction Method:** | EPA 3520C | **Units:** | ug/L |
| **Analysis Method:** | Krone | **Basis:** | NA |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG1009459 |

| | Lab Control Sample KWG1009459-1 Lab Control Spike | | | Duplicate Lab Control Sample KWG1009459-2 Duplicate Lab Control Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 0.165 | 0.500 | 33 | 0.208 | 0.500 | 42 | 24-104 | 23 | 30 |
| Tri-n-butyltin Cation | 0.171 | 0.446 | 38 | 0.205 | 0.446 | 46 | 30-120 | 18 | 30 |
| Di-n-butyltin Cation | 0.154 | 0.384 | 40 | 0.191 | 0.384 | 50 | 18-128 | 21 | 30 |
| n-Butyltin Cation | 0.161 | 0.312 | 52 | 0.215 | 0.312 | 69 | 40-165 | 29 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |

**Lab Control Spike Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Extraction Method:** | METHOD | **Units:** | ug/Kg |
| **Analysis Method:** | Krone | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG1009567 |

| | Lab Control Sample KWG1009567-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Tetra-n-butyltin | 16.4 | 25.0 | 66 | 30-110 |
| Tri-n-butyltin Cation | 14.1 | 22.2 | 63 | 25-101 |
| Di-n-butyltin Cation | 8.65 | 19.2 | 45 | 35-108 |
| n-Butyltin Cation | 16.4 | 15.6 | 105 | 20-123 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 |
| | | **Time Analyzed:** | 23:35 |

## Method Blank Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\GC26\DATA\090810A\0908F005.D |
| **Lab Code:** | KWG1009459-3 | **Instrument ID:** | GC26 |
| **Extraction Method:** | EPA 3520C | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009459 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG1009459-1 | J:\GC26\DATA\090810A\0908F006.D | 09/08/10 | 23:51 |
| Duplicate Lab Control Sample | KWG1009459-2 | J:\GC26\DATA\090810A\0908F007.D | 09/09/10 | 00:08 |
| LPRC07C-RB | K1008857-003 | J:\GC26\DATA\090810A\0908F008.D | 09/09/10 | 00:24 |

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |
| | | **Time Analyzed:** | 21:54 |

**Method Blank Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\GC26\DATA\091510C\0915F014.D |
| **Lab Code:** | KWG1009567-4 | **Instrument ID:** | GC26 |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG1009567-3 | J:\GC26\DATA\091510C\0915F015.D | 09/15/10 | 22:10 |
| Batch QC | K1008775-002 | J:\GC26\DATA\091510C\0915F017.D | 09/15/10 | 22:44 |
| Batch QCMS | KWG1009567-1 | J:\GC26\DATA\091510C\0915F018.D | 09/15/10 | 23:01 |
| Batch QCDMS | KWG1009567-2 | J:\GC26\DATA\091510C\0915F019.D | 09/15/10 | 23:17 |
| LPRC07C | K1008857-001 | J:\GC26\DATA\091510C\0915F021.D | 09/15/10 | 23:51 |
| LPRC13A | K1008857-002 | J:\GC26\DATA\091510C\0915F022.D | 09/16/10 | 00:08 |

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 |
| | | **Time Analyzed:** | 23:51 |

**Lab Control Sample Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\GC26\DATA\090810A\0908F006.D |
| **Lab Code:** | KWG1009459-1 | **Instrument ID:** | GC26 |
| **Extraction Method:** | EPA 3520C | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009459 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG1009459-3 | J:\GC26\DATA\090810A\0908F005.D | 09/08/10 | 23:35 |
| LPRC07C-RB | K1008857-003 | J:\GC26\DATA\090810A\0908F008.D | 09/09/10 | 00:24 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |
| | | **Time Analyzed:** | 22:10 |

## Lab Control Sample Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\GC26\DATA\091510C\0915F015.D |
| **Lab Code:** | KWG1009567-3 | **Instrument ID:** | GC26 |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG1009567-4 | J:\GC26\DATA\091510C\0915F014.D | 09/15/10 | 21:54 |
| Batch QC | K1008775-002 | J:\GC26\DATA\091510C\0915F017.D | 09/15/10 | 22:44 |
| Batch QCMS | KWG1009567-1 | J:\GC26\DATA\091510C\0915F018.D | 09/15/10 | 23:01 |
| Batch QCDMS | KWG1009567-2 | J:\GC26\DATA\091510C\0915F019.D | 09/15/10 | 23:17 |
| LPRC07C | K1008857-001 | J:\GC26\DATA\091510C\0915F021.D | 09/15/10 | 23:51 |
| LPRC13A | K1008857-002 | J:\GC26\DATA\091510C\0915F022.D | 09/16/10 | 00:08 |

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

**Initial Calibration Summary**
**Butyltins (as cation)**

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-1

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\083010A\0830FA03.D | E | J:\GC26\DATA\083010A\0830FA08.D |
| B | J:\GC26\DATA\083010A\0830FA04.D | F | J:\GC26\DATA\083010A\0830FA09.D |
| C | J:\GC26\DATA\083010A\0830FA05.D | G | J:\GC26\DATA\083010A\0830FA11.D |
| D | J:\GC26\DATA\083010A\0830FA07.D | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 20500 | B | 5.0 | 16500 | C | 20 | 18100 | D | 200 | 22800 | E | 500 | 24900 |
| | F | 1000 | 25300 | G | 50 | 15900 | | | | | | | | | |
| Tri-n-butyltin Cation | | | | B | 4.5 | 26800 | C | 18 | 27600 | D | 180 | 30800 | E | 450 | 31300 |
| | F | 890 | 32000 | G | 45 | 27200 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 34300 | B | 3.8 | 34900 | C | 15 | 34900 | D | 150 | 43500 | E | 380 | 42800 |
| | F | 770 | 45300 | G | 38 | 35300 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 44300 | B | 3.1 | 39000 | C | 12 | 38900 | D | 120 | 47100 | E | 310 | 50200 |
| | F | 620 | 51200 | G | 31 | 39600 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 24600 | B | 5.0 | 19800 | C | 20 | 25000 | D | 200 | 26100 | E | 500 | 26900 |
| | F | 1000 | 27700 | G | 50 | 21900 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-1

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 18.8 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 8.0 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 12.6 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 12.0 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 11.5 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Calibration Date:** | 08/30/2010 |
| | | **Date Analyzed:** | 08/30/2010 |

**Second Source Calibration Verification**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration ID:** | CAL9814 |
| **Analysis Method:** | Krone | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\083010A\0830FA12.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 54 | 20600 | 22100 | 7 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 36 | 29300 | 23700 | -19 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 37 | 38700 | 37500 | -3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 44300 | 43800 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-35

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\083010A\0830FA03.D\0830FA03c.d | E | J:\GC26\DATA\083010A\0830FA08.D\0830FA08c.d |
| B | J:\GC26\DATA\083010A\0830FA04.D\0830FA04c.d | F | J:\GC26\DATA\083010A\0830FA09.D\0830FA09c.d |
| C | J:\GC26\DATA\083010A\0830FA05.D\0830FA05c.d | G | J:\GC26\DATA\083010A\0830FA11.D\0830FA11c.d |
| D | J:\GC26\DATA\083010A\0830FA07.D\0830FA07c.d | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 20300 | B | 5.0 | 17300 | C | 20 | 17500 | D | 200 | 19200 | E | 500 | 18600 |
| | F | 1000 | 19300 | G | 50 | 15500 | | | | | | | | | |
| Tri-n-butyltin Cation | A | 1.8 | 27200 | B | 4.5 | 25000 | C | 18 | 27100 | D | 180 | 27500 | E | 450 | 26200 |
| | F | 890 | 26300 | G | 45 | 24600 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 32900 | B | 3.8 | 34300 | C | 15 | 33700 | D | 150 | 35700 | E | 380 | 34500 |
| | F | 770 | 34600 | G | 38 | 31700 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 40000 | B | 3.1 | 39000 | C | 12 | 36300 | D | 120 | 39300 | E | 310 | 39400 |
| | F | 620 | 40900 | G | 31 | 34600 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 21900 | B | 5.0 | 19400 | C | 20 | 22700 | D | 200 | 22500 | E | 500 | 21800 |
| | F | 1000 | 22000 | G | 50 | 19000 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-35

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 8.7 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 4.2 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 3.9 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 5.8 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 7.1 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010
**Date Analyzed:** 08/30/2010

**Second Source Calibration Verification**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration ID:** CAL9814
**Units:** ng/mL

**File ID:** J:\GC26\DATA\083010A\0830FA12.D\0830FA12c.d

**Column ID:** RTX-35

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 54 | 18200 | 19700 | 8 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 37 | 26300 | 21600 | -18 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 40 | 33900 | 35600 | 5 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 38500 | 38200 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-1

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\091510B\0915FA03.D | E | J:\GC26\DATA\091510B\0915FA07.D |
| B | J:\GC26\DATA\091510B\0915FA04.D | F | J:\GC26\DATA\091510B\0915FA08.D |
| C | J:\GC26\DATA\091510B\0915FA05.D | G | J:\GC26\DATA\091510B\0915FA09.D |
| D | J:\GC26\DATA\091510B\0915FA06.D | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | | B | 5.0 | 12900 | C | 20 | 12000 | D | 50 | 15800 | E | 200 | 17800 |
| | F | 500 | 18900 | G | 1000 | 19700 | | | | | | | | | |
| Tri-n-butyltin Cation | | | | B | 4.5 | 23300 | C | 18 | 18400 | D | 45 | 23100 | E | 180 | 25000 |
| | F | 450 | 26100 | G | 890 | 26600 | | | | | | | | | |
| Di-n-butyltin Cation | | | | B | 3.8 | 22600 | C | 15 | 23800 | D | 38 | 29100 | E | 150 | 32100 |
| | F | 380 | 35600 | G | 770 | 35300 | | | | | | | | | |
| n-Butyltin Cation | | | | B | 3.1 | 27500 | C | 12 | 32400 | D | 31 | 35800 | E | 120 | 38300 |
| | F | 310 | 40500 | G | 620 | 41400 | | | | | | | | | |
| Tri-n-propyltin | | | | B | 5.0 | 15600 | C | 20 | 19200 | D | 50 | 18900 | E | 200 | 21500 |
| | F | 500 | 22500 | G | 1000 | 23900 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-1

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 19.8 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 12.5 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 18.9 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 14.7 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 14.7 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010
**Date Analyzed:** 09/15/2010

**Second Source Calibration Verification**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration ID:** CAL9871
**Units:** ng/mL

**File ID:** J:\GC26\DATA\091510B\0915FA10.D

**Column ID:** RTX-1

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 16200 | 15800 | -3 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 35 | 23700 | 18700 | -21 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 39 | 29700 | 30600 | 3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 29 | 36000 | 33200 | -8 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-35

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\091510B\0915FA03.D\0915FA03c.d | E | J:\GC26\DATA\091510B\0915FA07.D\0915FA07c.d |
| B | J:\GC26\DATA\091510B\0915FA04.D\0915FA04c.d | F | J:\GC26\DATA\091510B\0915FA08.D\0915FA08c.d |
| C | J:\GC26\DATA\091510B\0915FA05.D\0915FA05c.d | G | J:\GC26\DATA\091510B\0915FA09.D\0915FA09c.d |
| D | J:\GC26\DATA\091510B\0915FA06.D\0915FA06c.d | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 22800 | B | 5.0 | 20100 | C | 20 | 14100 | D | 50 | 16500 | E | 200 | 17100 |
| | F | 500 | 17700 | G | 1000 | 18500 | | | | | | | | | |
| Tri-n-butyltin Cation | A | 1.8 | 26200 | B | 4.5 | 25700 | C | 18 | 21700 | D | 45 | 25800 | E | 180 | 25000 |
| | F | 450 | 25000 | G | 890 | 26100 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 29400 | B | 3.8 | 30700 | C | 15 | 28400 | D | 38 | 30800 | E | 150 | 32000 |
| | F | 380 | 32300 | G | 770 | 33600 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 39400 | B | 3.1 | 38500 | C | 12 | 32800 | D | 31 | 34500 | E | 120 | 36300 |
| | F | 310 | 37100 | G | 620 | 39200 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 22100 | B | 5.0 | 19300 | C | 20 | 19000 | D | 50 | 21400 | E | 200 | 21200 |
| | F | 500 | 21200 | G | 1000 | 22300 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-35

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 15.3 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 6.2 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 5.7 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 6.8 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 6.2 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010
**Date Analyzed:** 09/15/2010

**Second Source Calibration Verification**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration ID:** CAL9871
**Units:** ng/mL

**File ID:** J:\GC26\DATA\091510B\0915FA10.D\0915FA10c.d

**Column ID:** RTX-35

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 18100 | 17700 | -2 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 35 | 25100 | 19900 | -21 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 37 | 31000 | 30300 | -3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 30 | 36800 | 34900 | -5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/08/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F003.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 42 | 20600 | 17100 | -17 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 38 | 29300 | 24900 | -15 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 30 | 38700 | 30400 | -21 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 26 | 44300 | 37200 | -16 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 43 | 24600 | 20900 | -15 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Date Analyzed:** 09/08/2010

## Continuing Calibration Verification Summary
## Butyltins (as cation)

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration Date:** 08/30/2010
**Calibration ID:** CAL9814
**Analysis Lot:** KWG1009479
**Units:** ng/mL

**File ID:** J:\GC26\DATA\090810A\0908F003.D\0908F003C.D

**Column ID:** RTX-35

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 45 | 18200 | 16400 | -10 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 39 | 26300 | 23200 | -12 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 33900 | 30600 | -10 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 27 | 38500 | 33900 | -12 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 49 | 21300 | 20700 | -3 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/09/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F020.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 38 | 20600 | 15700 | -24 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 37 | 29300 | 24200 | -17 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 29 | 38700 | 29700 | -23 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 24 | 44300 | 34900 | -21 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 38 | 24600 | 18700 | -24 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/09/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F020.D\0908F020C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 45 | 18200 | 16600 | -9 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 42 | 26300 | 24800 | -6 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 33900 | 30700 | -10 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 29 | 38500 | 35400 | -8 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 46 | 21300 | 19400 | -9 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/15/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F012.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 46 | 16200 | 14900 | -8 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 41 | 23700 | 22000 | -7 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 29700 | 27100 | -9 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 32 | 36000 | 36900 | 2 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 50 | 20300 | 20100 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/15/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F012.D\0915F012C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 18100 | 17800 | -2 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 47 | 25100 | 26600 | 6 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 41 | 31000 | 33200 | 7 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 32 | 36800 | 38400 | 4 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 52 | 20900 | 21900 | 5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/16/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F025.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 44 | 16200 | 14300 | -11 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 47 | 23700 | 24900 | 5 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 41 | 29700 | 31600 | 6 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 28 | 36000 | 32900 | -9 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 46 | 20300 | 18500 | -9 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/16/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F025.D\0915F025C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 42 | 18100 | 15200 | -16 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 45 | 25100 | 25400 | 1 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 38 | 31000 | 31000 | 0 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 36800 | 36600 | -1 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 47 | 20900 | 19800 | -5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857

**Analysis Run Log**
**Butyltins (as cation)**

**Analysis Method:** Krone

**Analysis Lot:** KWG1009479
**Instrument ID:** GC26
**Column:** RTX-1

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| 0908F002.D | Instrument Blank | KWG1009479-1 | 9/8/2010 | 22:46 | | 9/8/2010 | 22:57 |
| 0908F003.D | Continuing Calibration Verification | KWG1009479-2 | 9/8/2010 | 23:02 | | 9/8/2010 | 23:13 |
| 0908F005.D | Method Blank | KWG1009459-3 | 9/8/2010 | 23:35 | | 9/8/2010 | 23:46 |
| 0908F006.D | Lab Control Sample | KWG1009459-1 | 9/8/2010 | 23:51 | | 9/9/2010 | 00:02 |
| 0908F007.D | Duplicate Lab Control Sample | KWG1009459-2 | 9/9/2010 | 00:08 | | 9/9/2010 | 00:19 |
| 0908F008.D | LPRC07C-RB | K1008857-003 | 9/9/2010 | 00:24 | | 9/9/2010 | 00:35 |
| 0908F009.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 00:40 | | 9/9/2010 | 00:51 |
| 0908F010.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 00:57 | | 9/9/2010 | 01:08 |
| 0908F011.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 01:13 | | 9/9/2010 | 01:24 |
| 0908F012.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 01:30 | | 9/9/2010 | 01:41 |
| 0908F013.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 01:46 | | 9/9/2010 | 01:57 |
| 0908F014.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 02:02 | | 9/9/2010 | 02:13 |
| 0908F015.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 02:19 | | 9/9/2010 | 02:30 |
| 0908F016.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 02:35 | | 9/9/2010 | 02:46 |
| 0908F017.D | ZZZZZZ | ZZZZZZ | 9/9/2010 | 02:51 | | 9/9/2010 | 03:02 |
| 0908F019.D | Instrument Blank | KWG1009479-3 | 9/9/2010 | 03:24 | | 9/9/2010 | 03:35 |
| 0908F020.D | Continuing Calibration Verification | KWG1009479-4 | 9/9/2010 | 03:40 | | 9/9/2010 | 03:51 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857

**Analysis Run Log**
**Butyltins (as cation)**

**Analysis Method:** Krone

**Analysis Lot:** KWG1009780
**Instrument ID:** GC26
**Column:** RTX-1

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| 0915F002.D | Instrument Blank | KWG1009780-1 | 9/15/2010 | 18:37 | | 9/15/2010 | 18:48 |
| 0915F003.D | Continuing Calibration Verification | KWG1009780-2 | 9/15/2010 | 18:53 | | 9/15/2010 | 19:04 |
| 0915F005.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 19:26 | | 9/15/2010 | 19:37 |
| 0915F006.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 19:42 | | 9/15/2010 | 19:53 |
| 0915F007.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 19:59 | | 9/15/2010 | 20:10 |
| 0915F008.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 20:15 | | 9/15/2010 | 20:26 |
| 0915F009.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 20:32 | | 9/15/2010 | 20:43 |
| 0915F011.D | Instrument Blank | KWG1009780-3 | 9/15/2010 | 21:05 | | 9/15/2010 | 21:16 |
| 0915F012.D | Continuing Calibration Verification | KWG1009780-4 | 9/15/2010 | 21:21 | | 9/15/2010 | 21:32 |
| 0915F014.D | Method Blank | KWG1009567-4 | 9/15/2010 | 21:54 | | 9/15/2010 | 22:05 |
| 0915F015.D | Lab Control Sample | KWG1009567-3 | 9/15/2010 | 22:10 | | 9/15/2010 | 22:21 |
| 0915F016.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 22:27 | | 9/15/2010 | 22:38 |
| 0915F017.D | Batch QC | K1008775-002 | 9/15/2010 | 22:44 | | 9/15/2010 | 22:55 |
| 0915F018.D | Batch QCMS | KWG1009567-1 | 9/15/2010 | 23:01 | | 9/15/2010 | 23:12 |
| 0915F019.D | Batch QCDMS | KWG1009567-2 | 9/15/2010 | 23:17 | | 9/15/2010 | 23:28 |
| 0915F020.D | ZZZZZZ | ZZZZZZ | 9/15/2010 | 23:34 | | 9/15/2010 | 23:46 |
| 0915F021.D | LPRC07C | K1008857-001 | 9/15/2010 | 23:51 | | 9/16/2010 | 00:02 |
| 0915F022.D | LPRC13A | K1008857-002 | 9/16/2010 | 00:08 | | 9/16/2010 | 00:19 |
| 0915F024.D | Instrument Blank | KWG1009780-5 | 9/16/2010 | 00:40 | | 9/16/2010 | 00:51 |
| 0915F025.D | Continuing Calibration Verification | KWG1009780-6 | 9/16/2010 | 00:57 | | 9/16/2010 | 01:08 |
| 0915F027.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 01:30 | | 9/16/2010 | 01:41 |
| 0915F028.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 01:46 | | 9/16/2010 | 01:57 |
| 0915F029.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 02:03 | | 9/16/2010 | 02:14 |
| 0915F030.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 02:19 | | 9/16/2010 | 02:30 |
| 0915F031.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 02:35 | | 9/16/2010 | 02:46 |
| 0915F032.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 02:51 | | 9/16/2010 | 03:02 |
| 0915F034.D | Instrument Blank | KWG1009780-7 | 9/16/2010 | 03:24 | | 9/16/2010 | 03:35 |
| 0915F035.D | Continuing Calibration Verification | KWG1009780-8 | 9/16/2010 | 03:41 | | 9/16/2010 | 03:52 |
| 0915F037.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 04:15 | | 9/16/2010 | 04:26 |
| 0915F038.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 04:31 | | 9/16/2010 | 04:42 |
| 0915F039.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 04:47 | | 9/16/2010 | 04:58 |
| 0915F040.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 05:03 | | 9/16/2010 | 05:14 |
| 0915F041.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 05:20 | | 9/16/2010 | 05:31 |
| 0915F042.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 05:37 | | 9/16/2010 | 05:48 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857

## Analysis Run Log
## Butyltins (as cation)

**Analysis Method:** Krone

**Analysis Lot:** KWG1009780
**Instrument ID:** GC26
**Column:** RTX-1

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| 0915F043.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 05:53 | | 9/16/2010 | 06:04 |
| 0915F044.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 06:09 | | 9/16/2010 | 06:20 |
| 0915F045.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 06:26 | | 9/16/2010 | 06:37 |
| 0915F046.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 06:42 | | 9/16/2010 | 06:53 |
| 0915F048.D | Instrument Blank | KWG1009780-9 | 9/16/2010 | 07:15 | | 9/16/2010 | 07:26 |
| 0915F049.D | Continuing Calibration Verification | KWG1009780-10 | 9/16/2010 | 07:31 | | 9/16/2010 | 07:42 |
| 0915F051.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 08:04 | | 9/16/2010 | 08:15 |
| 0915F052.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 08:20 | | 9/16/2010 | 08:31 |
| 0915F053.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 08:36 | | 9/16/2010 | 08:47 |
| 0915F057.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 09:43 | | 9/16/2010 | 09:54 |
| 0915F058.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 09:59 | | 9/16/2010 | 10:10 |
| 0915F059.D | ZZZZZZ | ZZZZZZ | 9/16/2010 | 10:15 | | 9/16/2010 | 10:26 |
| 0915F061.D | Instrument Blank | KWG1009780-11 | 9/16/2010 | 10:48 | | 9/16/2010 | 10:59 |
| 0915F062.D | Continuing Calibration Verification | KWG1009780-12 | 9/16/2010 | 11:04 | | 9/16/2010 | 11:15 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Water

**Service Request:** K1008857
**Date Extracted:** 08/23/2010

**Extraction Prep Log**
**Butyltins (as cation)**

**Extraction Method:** EPA 3520C
**Analysis Method:** Krone

**Extraction Lot:** KWG1009459
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| LPRC07C-RB | K1008857-003 | 08/16/10 | 08/18/10 | 500mL | 1mL | NA | |
| Method Blank | KWG1009459-3 | NA | NA | 500mL | 1mL | NA | |
| Lab Control Sample | KWG1009459-1 | NA | NA | 500mL | 1mL | NA | |
| Duplicate Lab Control Sample | KWG1009459-2 | NA | NA | 500mL | 1mL | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Sediment

**Service Request:** K1008857
**Date Extracted:** 08/24/2010

**Extraction Prep Log**
**Butyltins (as cation)**

**Extraction Method:** METHOD
**Analysis Method:** Krone

**Extraction Lot:** KWG1009567
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| LPRC07C | K1008857-001 | 08/16/10 | 08/18/10 | 20.16g | 4mL | 66.1 | |
| LPRC13A | K1008857-002 | 08/16/10 | 08/18/10 | 20.04g | 4mL | 72.9 | |
| Method Blank | KWG1009567-4 | NA | NA | 20.44g | 4mL | NA | |
| Batch QC | K1008775-002 | NA | NA | 20.33g | 4mL | 66.1 | |
| Batch QCMS | KWG1009567-1 | NA | NA | 20.03g | 4mL | 66.1 | |
| Batch QCDMS | KWG1009567-2 | NA | NA | 20.20g | 4mL | 66.1 | |
| Lab Control Sample | KWG1009567-3 | NA | NA | 20.00g | 4mL | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

# COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC07C | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-001 | **Basis:** | Dry |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | | |

| Analyte Name | MRL | MDL | Primary Result | Confirmation Result | RPD | Q | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Tri-n-butyltin Cation | 1.6 | 0.65 | 6.4 | 6.9 | 7.5 | | 1 | 09/15/10 |
| Di-n-butyltin Cation | 1.6 | 0.29 | 16 | 17 | 6.1 | | 1 | 09/15/10 |
| n-Butyltin Cation | 1.6 | 0.40 | 15 | 15 | 0.0 | | 1 | 09/15/10 |

# COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC13A | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-002 | **Basis:** | Dry |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | | |

| Analyte Name | MRL | MDL | Primary Result | Confirmation Result | RPD | Q | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 1.4 | 0.61 | 1.7 | 2.1 | 21.1 | | 1 | 09/16/10 |
| Tri-n-butyltin Cation | 1.4 | 0.59 | 0.97 | 1.2 | 21.2 | J | 1 | 09/16/10 |
| Di-n-butyltin Cation | 1.4 | 0.27 | 6.0 | 6.1 | 1.7 | | 1 | 09/16/10 |
| n-Butyltin Cation | 1.4 | 0.36 | 7.3 | 11 | 40.4 | P | 1 | 09/16/10 |

# Organic Analysis:
# Butyltins (as cation)

## Validation Package

# Organic Analysis:
# Butyltins (as cation)

## Validation Package

## QC Reports

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Water

**Service Request:** K1008857

**Surrogate Recovery Summary**
**Butyltins (as cation)**

**Extraction Method:** EPA 3520C
**Analysis Method:** Krone

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| LPRC07C-RB | K1008857-003 | 70 |
| Method Blank | KWG1009459-3 | 58 |
| Lab Control Sample | KWG1009459-1 | 46 |
| Duplicate Lab Control Sample | KWG1009459-2 | 59 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Tri-n-propyltin 24-142

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1
**Sample Matrix:** Sediment

**Service Request:** K1008857

**Surrogate Recovery Summary**
**Butyltins (as cation)**

**Extraction Method:** METHOD
**Analysis Method:** Krone

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| LPRC07C | K1008857-001 | 70 |
| LPRC13A | K1008857-002 | 63 |
| Method Blank | KWG1009567-4 | 57 |
| Batch QC | K1008775-002 | 65 |
| Batch QCMS | KWG1009567-1 | 67 |
| Batch QCDMS | KWG1009567-2 | 66 |
| Lab Control Sample | KWG1009567-3 | 63 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Tri-n-propyltin 18-95

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |

## Matrix Spike/Duplicate Matrix Spike Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | ug/Kg |
| **Lab Code:** | K1008775-002 | **Basis:** | Dry |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

| | | Batch QCMS KWG1009567-1 Matrix Spike | | | Batch QCDMS KWG1009567-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 0.71 | 26.7 | 37.8 | 69 | 21.6 | 37.4 | 56 | 10-120 | 21 | 40 |
| Tri-n-butyltin Cation | ND | 19.6 | 33.5 | 59 | 22.1 | 33.3 | 66 | 10-118 | 12 | 40 |
| Di-n-butyltin Cation | ND | 19.1 | 29.0 | 66 | 23.3 | 28.8 | 81 | 10-145 | 20 | 40 |
| n-Butyltin Cation | ND | 18.6 | 23.6 | 79 | 20.9 | 23.4 | 89 | 10-126 | 11 | 40 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 - 09/09/2010 |

**Lab Control Spike/Duplicate Lab Control Spike Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Extraction Method:** | EPA 3520C | **Units:** | ug/L |
| **Analysis Method:** | Krone | **Basis:** | NA |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG1009459 |

| | Lab Control Sample KWG1009459-1 Lab Control Spike | | | Duplicate Lab Control Sample KWG1009459-2 Duplicate Lab Control Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 0.165 | 0.500 | 33 | 0.208 | 0.500 | 42 | 24-104 | 23 | 30 |
| Tri-n-butyltin Cation | 0.171 | 0.446 | 38 | 0.205 | 0.446 | 46 | 30-120 | 18 | 30 |
| Di-n-butyltin Cation | 0.154 | 0.384 | 40 | 0.191 | 0.384 | 50 | 18-128 | 21 | 30 |
| n-Butyltin Cation | 0.161 | 0.312 | 52 | 0.215 | 0.312 | 69 | 40-165 | 29 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |

**Lab Control Spike Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Extraction Method:** | METHOD | **Units:** | ug/Kg |
| **Analysis Method:** | Krone | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG1009567 |

| | Lab Control Sample KWG1009567-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Tetra-n-butyltin | 16.4 | 25.0 | 66 | 30-110 |
| Tri-n-butyltin Cation | 14.1 | 22.2 | 63 | 25-101 |
| Di-n-butyltin Cation | 8.65 | 19.2 | 45 | 35-108 |
| n-Butyltin Cation | 16.4 | 15.6 | 105 | 20-123 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 |
| | | **Time Analyzed:** | 23:35 |

**Method Blank Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\GC26\DATA\090810A\0908F005.D |
| **Lab Code:** | KWG1009459-3 | **Instrument ID:** | GC26 |
| **Extraction Method:** | EPA 3520C | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009459 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG1009459-1 | J:\GC26\DATA\090810A\0908F006.D | 09/08/10 | 23:51 |
| Duplicate Lab Control Sample | KWG1009459-2 | J:\GC26\DATA\090810A\0908F007.D | 09/09/10 | 00:08 |
| LPRC07C-RB | K1008857-003 | J:\GC26\DATA\090810A\0908F008.D | 09/09/10 | 00:24 |

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |
| | | **Time Analyzed:** | 21:54 |

**Method Blank Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\GC26\DATA\091510C\0915F014.D |
| **Lab Code:** | KWG1009567-4 | **Instrument ID:** | GC26 |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG1009567-3 | J:\GC26\DATA\091510C\0915F015.D | 09/15/10 | 22:10 |
| Batch QC | K1008775-002 | J:\GC26\DATA\091510C\0915F017.D | 09/15/10 | 22:44 |
| Batch QCMS | KWG1009567-1 | J:\GC26\DATA\091510C\0915F018.D | 09/15/10 | 23:01 |
| Batch QCDMS | KWG1009567-2 | J:\GC26\DATA\091510C\0915F019.D | 09/15/10 | 23:17 |
| LPRC07C | K1008857-001 | J:\GC26\DATA\091510C\0915F021.D | 09/15/10 | 23:51 |
| LPRC13A | K1008857-002 | J:\GC26\DATA\091510C\0915F022.D | 09/16/10 | 00:08 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/23/2010 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 09/08/2010 |
| | | **Time Analyzed:** | 23:51 |

## Lab Control Sample Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\GC26\DATA\090810A\0908F006.D |
| **Lab Code:** | KWG1009459-1 | **Instrument ID:** | GC26 |
| **Extraction Method:** | EPA 3520C | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009459 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG1009459-3 | J:\GC26\DATA\090810A\0908F005.D | 09/08/10 | 23:35 |
| LPRC07C-RB | K1008857-003 | J:\GC26\DATA\090810A\0908F008.D | 09/09/10 | 00:24 |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Extracted:** | 08/24/2010 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 09/15/2010 |
| | | **Time Analyzed:** | 22:10 |

## Lab Control Sample Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\GC26\DATA\091510C\0915F015.D |
| **Lab Code:** | KWG1009567-3 | **Instrument ID:** | GC26 |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG1009567 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG1009567-4 | J:\GC26\DATA\091510C\0915F014.D | 09/15/10 | 21:54 |
| Batch QC | K1008775-002 | J:\GC26\DATA\091510C\0915F017.D | 09/15/10 | 22:44 |
| Batch QCMS | KWG1009567-1 | J:\GC26\DATA\091510C\0915F018.D | 09/15/10 | 23:01 |
| Batch QCDMS | KWG1009567-2 | J:\GC26\DATA\091510C\0915F019.D | 09/15/10 | 23:17 |
| LPRC07C | K1008857-001 | J:\GC26\DATA\091510C\0915F021.D | 09/15/10 | 23:51 |
| LPRC13A | K1008857-002 | J:\GC26\DATA\091510C\0915F022.D | 09/16/10 | 00:08 |

# Organic Analysis:
# Butyltins (as cation)

## Validation Package

## Raw Data

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Water | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/09/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC07C-RB | **Units:** | ug/L |
| **Lab Code:** | K1008857-003 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F008.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.050 | U | 0.050 | 0.038 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.050 | U | 0.050 | 0.012 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.050 | U | 0.050 | 0.0073 | |
| 78763-54-9 | n-Butyltin Cation | 0.050 | U | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 70 | 24-142 | 09/09/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F008.D
**Lab ID:** K1008857-003
**RunType:** SMPL
**Matrix:** WATER

**Date Acquired:** 09/09/2010 00:24
**Date Quantitated:** 09/09/2010 15:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Duplicate Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: 9/10

Secondary Review: AC 9/10/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F008.D\0908F008C.D
**Lab ID:** K1008857-003
**RunType:** SMPL
**Matrix:** WATER

**Date Acquired:** 09/09/2010 00:24
**Date Quantitated:** 09/09/2010 15:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Duplicate Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/10/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | V | **Matrix:** | WATER |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | 08/16/2010 | **Receive Date:** | 08/18/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | KWG1009459 | **Report Group:** | K1008857 |
| **Analysis Method:** | Krone | **Prep Method:** | EPA 3520C | | |
| **Prep Ref:** | 952802 | **Prep Date:** | 08/23/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | Butyltins (as cation) | **Report List ID:** | LJ11138 |
| **MB Ref:** | J:\GC26\DATA\090810A\0908F005.D | **Method ID:** | MJ132 |
| | | **Quant based on Report List** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F008.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F008.D\0908F008c.d | | | **Vial:** | 18 |
| **Acqu Date:** | 09/09/2010 00:24 | **Quant Date:** | 09/09/2010 15:53 | **Dilution:** | 1.0 |
| **Run Type:** | SMPL | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | K1008857-003 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.14 +0.02 | 5.57 +0.02 | 3901023 | 3736170 | 158.81 | 175.24 | | | 70OK |
| | | | | %Recovery = | 64OK | 70OK | Limits = | 24-142 | |

## *Target Compounds*

**Final Conc. Units:** ug/L

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/L #1 | ug/L #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | 0.038U | 0.038U | 0.038U |
| Tri-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | 0.012U | 0.012U | 0.012U |
| Di-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | 0.0073U | 0.0073U | 0.0073U |
| n-Butyltin Cation | | | 0d | 0d | 0.0000 | 0.0000 | 0.029U | 0.029U | 0.029U |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 500 mL | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 1 mL | **Unit Factor:** | 1 |

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F008.D\FPD1A.CH Vial: 18
Signal #2 : J:\GC26\DATA\090810A\0908F008.D\FPD2B.CH
Acq On : 09 Sep 2010 12:24 am Operator: CCotnam
Sample : K1008857-003 | LPRC07C-RB Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:21 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.14 | 5.57 | 3901023 | 3736170 | 158.806 | 175.239 |
| | Target Compounds | | | | | | |

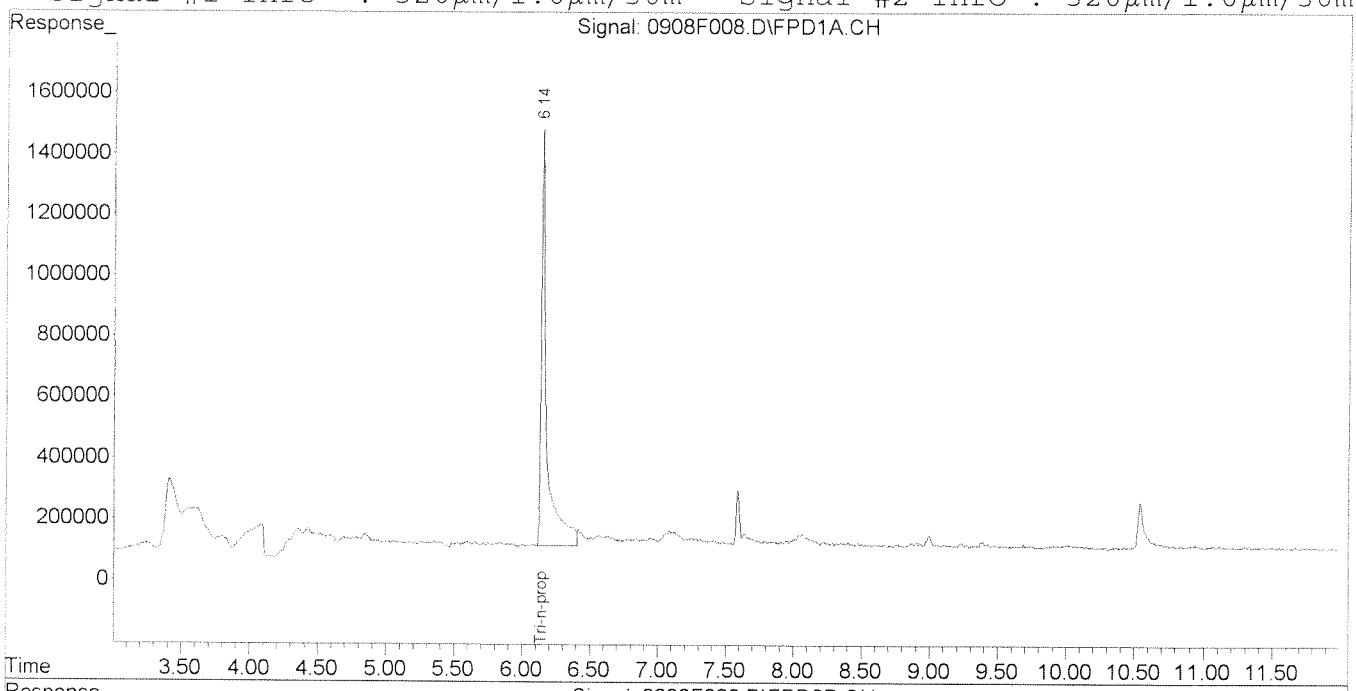
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

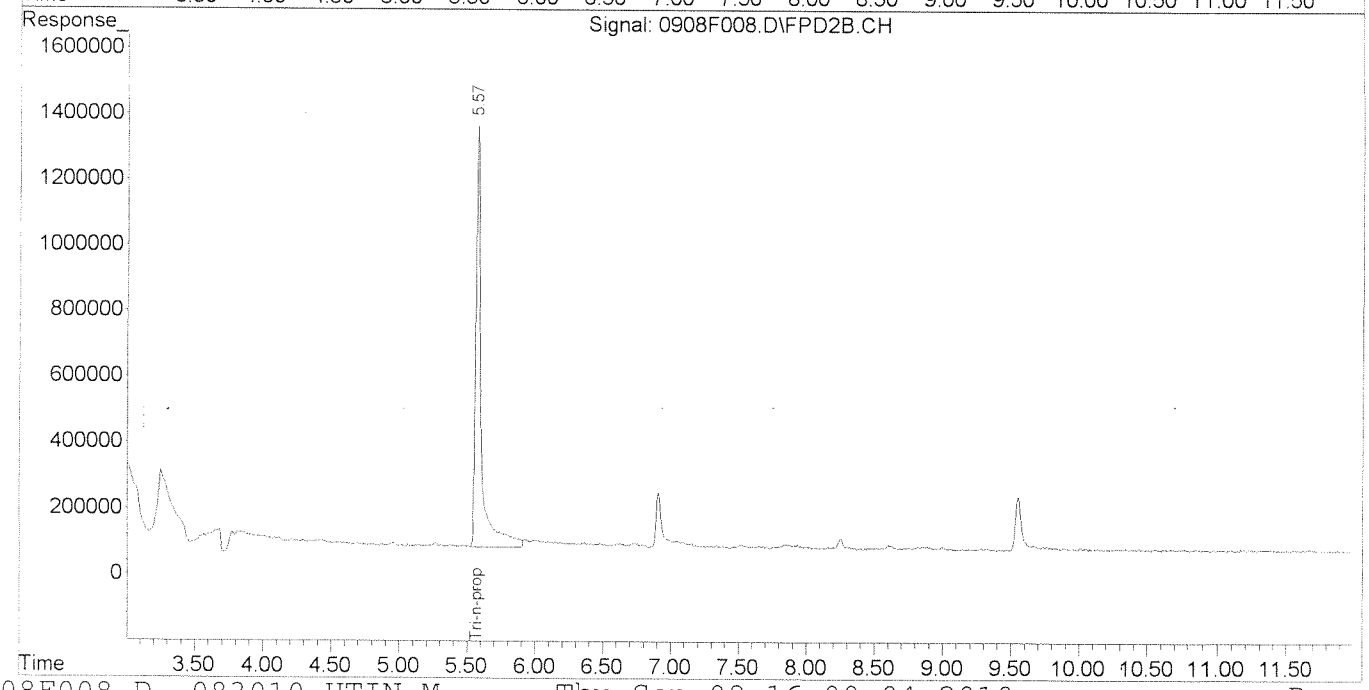
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F008.D\FPD1A.CH Vial: 18
Signal #2 : J:\GC26\DATA\090810A\0908F008.D\FPD2B.CH
Acq On : 09 Sep 2010 12:24 am Operator: CCotnam
Sample : K1008857-003 | LPRC07C-RB Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 15:53 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/08/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KWG1009459-3 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F005.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.050 | U | 0.050 | 0.038 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.050 | U | 0.050 | 0.012 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.050 | U | 0.050 | 0.0073 | |
| 78763-54-9 | n-Butyltin Cation | 0.050 | U | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 58 | 24-142 | 09/08/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F005.D
**Lab ID:** KWG1009459-3
**RunType:** MB
**Matrix:** WATER

**Date Acquired:** 09/08/2010 23:35
**Date Quantitated:** 09/09/2010 15:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: MSG/

Secondary Review: 9/10/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F005.D\0908F005C.D
**Lab ID:** KWG1009459-3
**RunType:** MB
**Matrix:** WATER

**Date Acquired:** 09/08/2010 23:35
**Date Quantitated:** 09/09/2010 15:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: MAGM

Secondary Review: 9/10/10

# *Quantitation Report*

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | WATER |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | KWG1009459 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | EPA 3520C | | |
| **Prep Ref:** | 952809 | **Prep Date:** | 08/23/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ132 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F005.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F005.D\0908F005c.d | | | **Vial:** | 15 |
| **Acqu Date:** | 09/08/2010 23:35 | **Quant Date:** | 09/09/2010 15:53 | **Dilution:** | 1.0 |
| **Run Type:** | MB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009459-3 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.14 +0.02 | 5.57 +0.02 | 3249710 | 3074570 | 132.29 | 144.21 | | | 58OK |
| | | | | %Recovery = | 53OK | 58OK | Limits = | 24-142 | |

## *Target Compounds*

**Final Conc. Units:** ug/L

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/L #1 | ug/L #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | 0.038U | 0.038U | 0.038U |
| Tri-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | 0.012U | 0.012U | 0.012U |
| Di-n-butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | 0.0073U | 0.0073U | 0.0073U |
| n-Butyltin Cation | 9.39 +0.01 | 8.60 | 44619 | 47268m | 1.01 | 1.23 | 0.029U | 0.029U | 0.029U |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 500 mL | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 1 mL | **Unit Factor:** | 1 |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F005.D\FPD1A.CH Vial: 15
Signal #2 : J:\GC26\DATA\090810A\0908F005.D\FPD2B.CH
Acq On : 08 Sep 2010 11:35 pm Operator: CCotnam
Sample : KWG1009459-3 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009459\3-MB.H | F=1 D=1 A=5 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:20 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.14 | 5.57 | 3249710 | 3074570 | 132.292 | 144.208 |
| | Target Compounds | | | | | | |
| 5) | n-Butyltin | 9.39 | 8.60 | 44619 | 47268 | 1.006 | 1.228m |

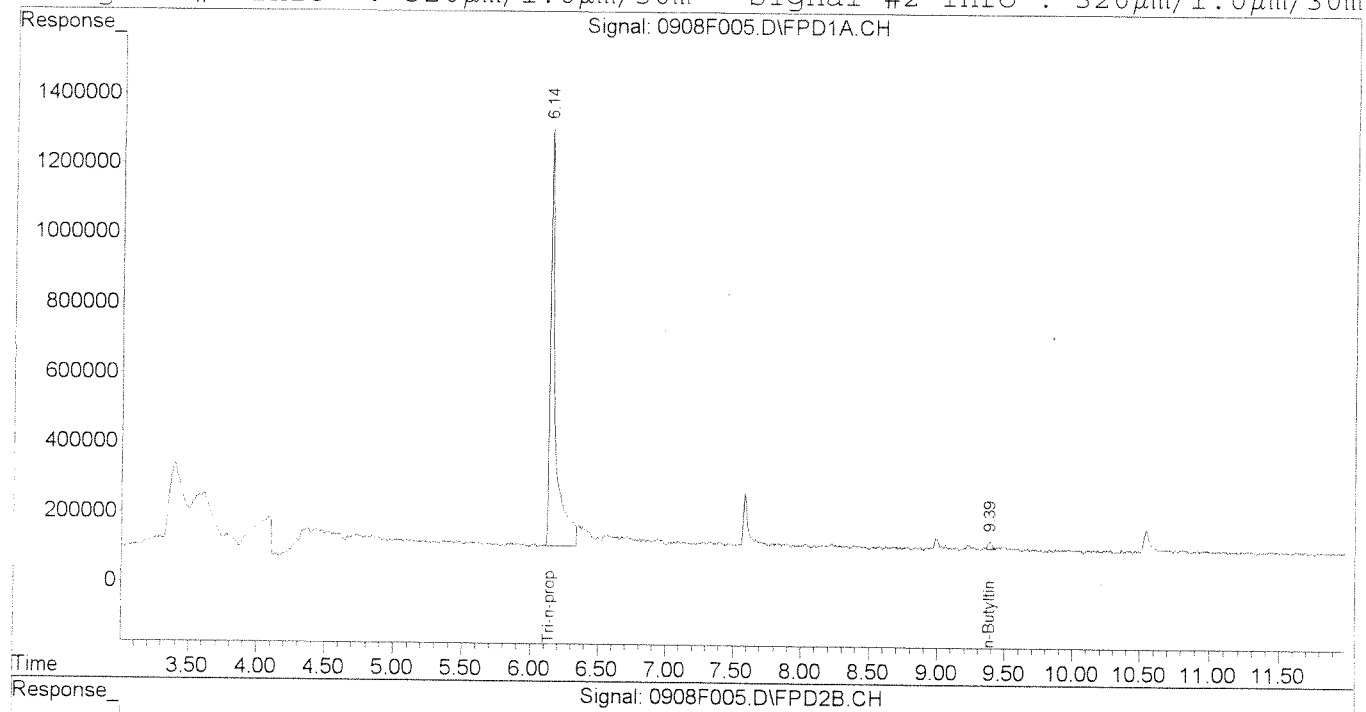
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

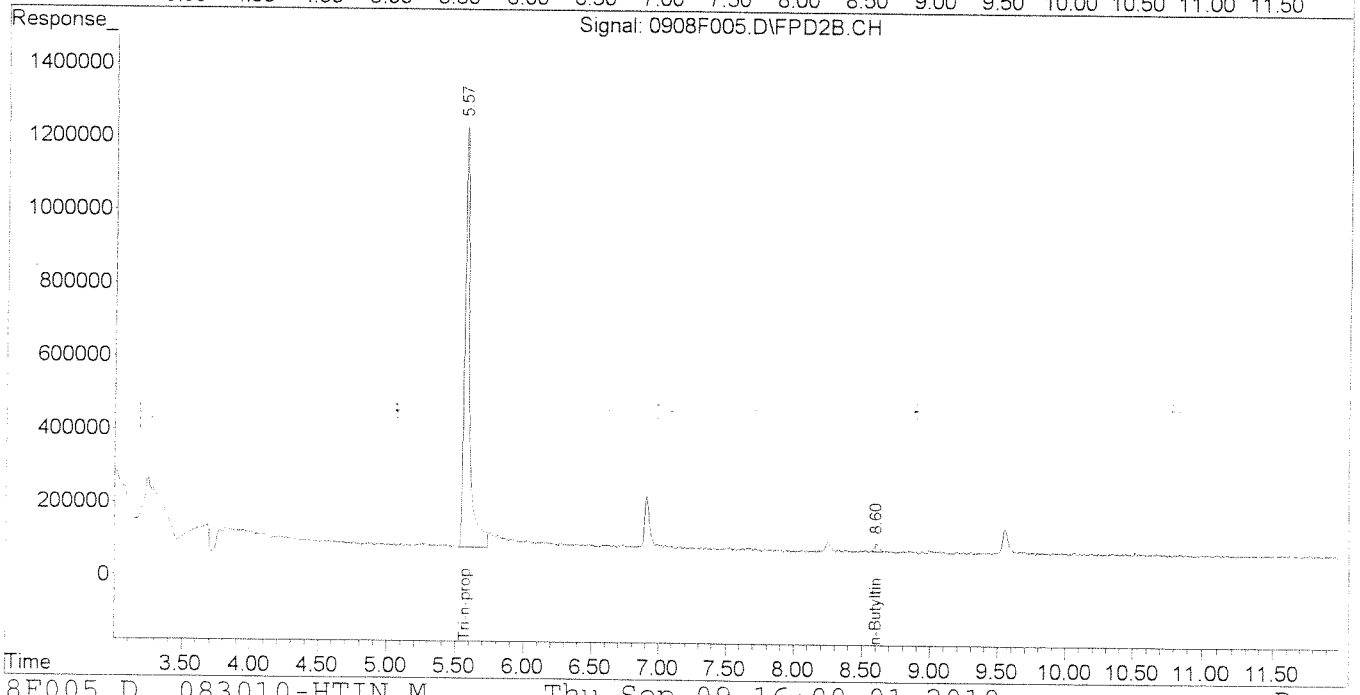
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F005.D\FPD1A.CH Vial: 15
Signal #2 : J:\GC26\DATA\090810A\0908F005.D\FPD2B.CH
Acq On : 08 Sep 2010 11:35 pm Operator: CCotnam
Sample : KWG1009459-3 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009459\3-MB.H | F=1 D=1 A=5 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 15:53 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

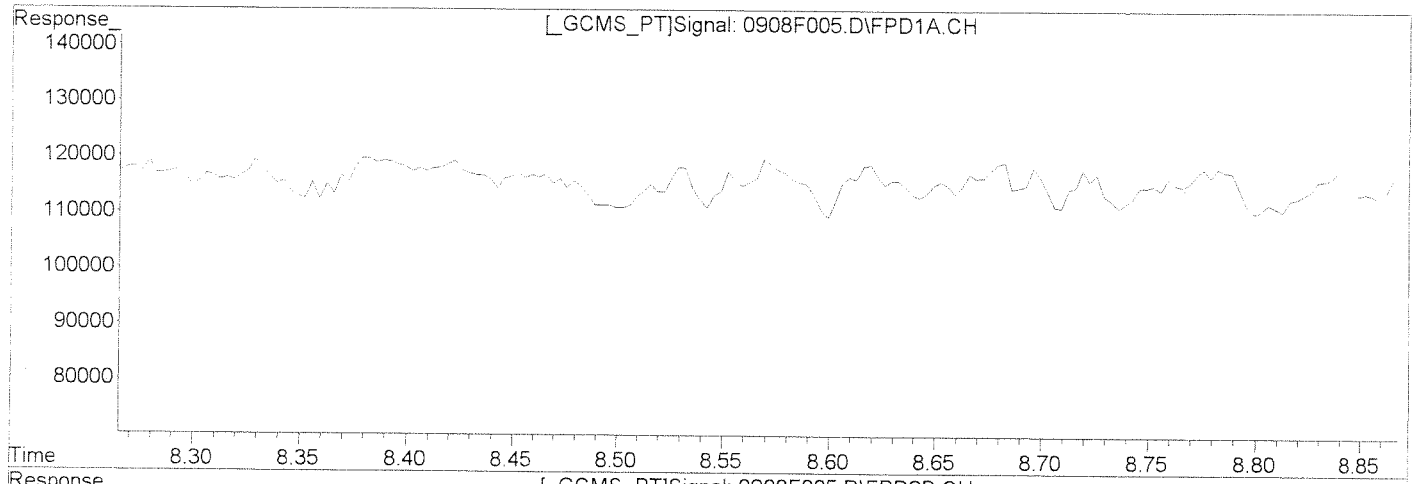


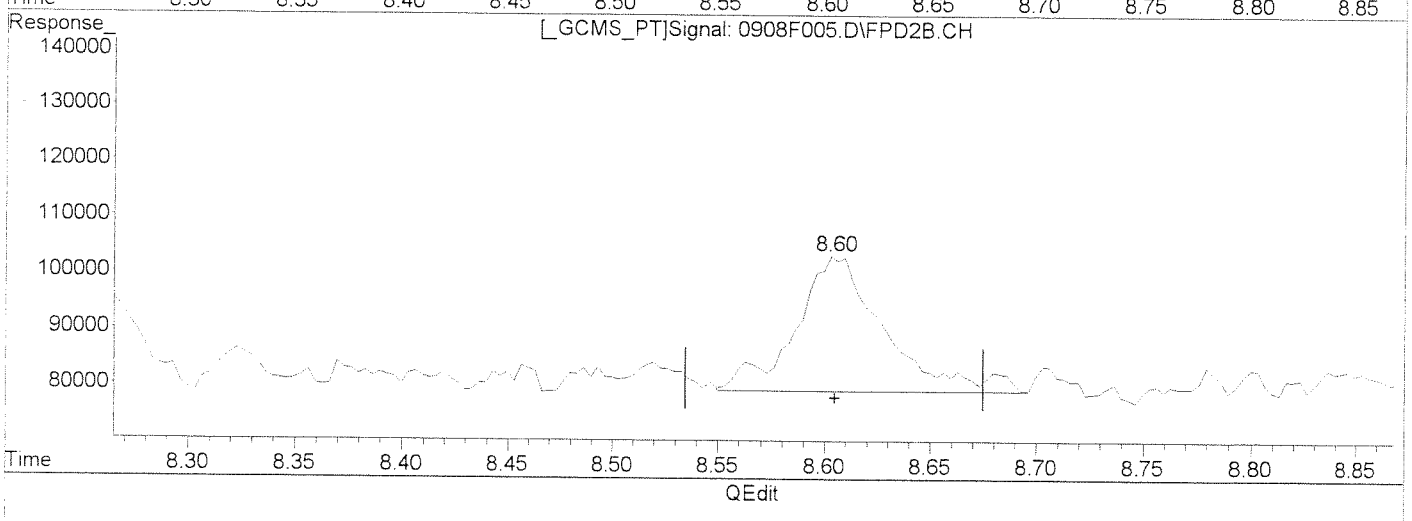



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\090810A\0908F005.D\FPD1A.CH Vial: 15
Signal #2 : J:\GC26\DATA\090810A\0908F005.D\FPD2B.CH
Acq On : 08 Sep 2010 11:35 pm Operator: CCotnam
Sample : KWG1009459-3 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009459\3-MB.H | F=1 D=1 A=5 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




(5) n-Butyltin

9.39min 1.006ng/mL

response 44619

Manual Integration:

Before

(5) n-Butyltin #2

8.60min 1.814ng/mL

response 69827

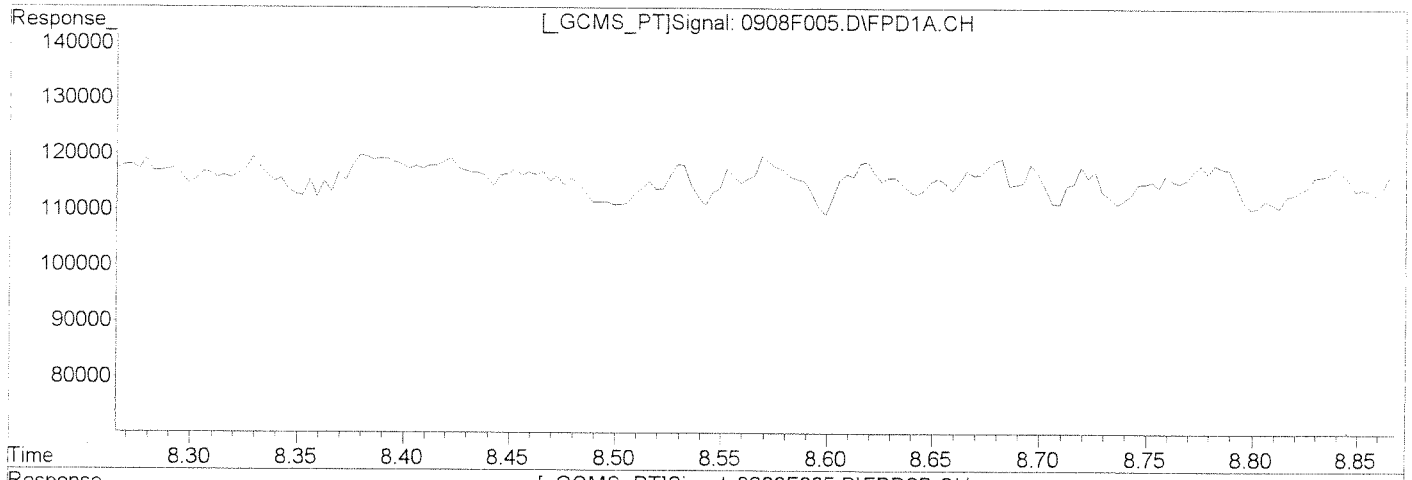
(+) = Expected Retention Time

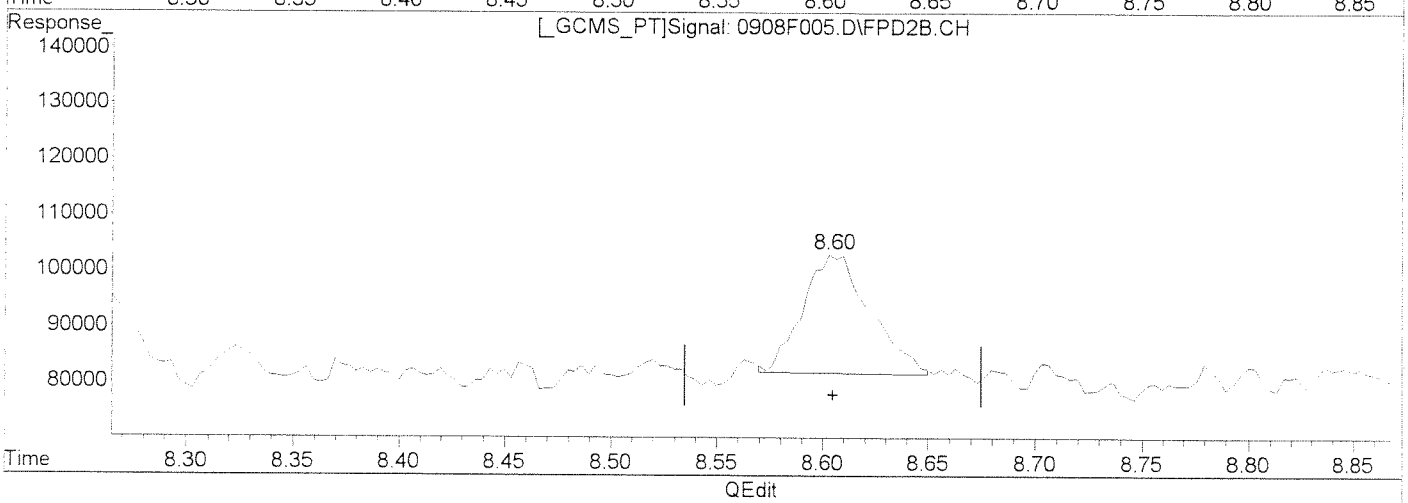
0908F005.D 083010-HTIN.M Thu Sep 09 15:53:04 2010

Quantification Report (QEdit)

Signal #1 : J:\GC26\DATA\090810A\0908F005.D\FPD1A.CH Vial: 15
Signal #2 : J:\GC26\DATA\090810A\0908F005.D\FPD2B.CH
Acq On : 08 Sep 2010 11:35 pm Operator: CCotnam
Sample : KWG1009459-3 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009459\3-MB.H | F=1 D=1 A=5 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




(5) n-Butyltin

9.39min 1.006ng/mL

response 44619

(5) n-Butyltin #2

8.60min 1.228ng/mL m

response 47268

Manual Integration:

After

Baseline/Shoulder

09/09/10

9/10/10

(+) = Expected Retention Time

0908F005.D 083010-HTIN.M Thu Sep 09 15:53:07 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/08/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Units:** | ug/L |
| **Lab Code:** | KWG1009459-1 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F006.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **0.165** | | 0.050 | 0.038 | |
| **36643-28-4** | Tri-n-butyltin Cation | **0.171** | | 0.050 | 0.012 | |
| **14488-53-0** | Di-n-butyltin Cation | **0.154** | | 0.050 | 0.0073 | |
| **78763-54-9** | n-Butyltin Cation | **0.161** | | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 46 | 24-142 | 09/08/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F006.D
**Lab ID:** KWG1009459-1
**RunType:** LCS
**Matrix:** WATER

**Date Acquired:** 09/08/2010 23:51
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/20/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F006.D\0908F006C.D
**Lab ID:** KWG1009459-1
**RunType:** LCS
**Matrix:** WATER

**Date Acquired:** 09/08/2010 23:51
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: MPN

Secondary Review: 9/10/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | WATER |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | KWG1009459 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | EPA 3520C | | |
| **Prep Ref:** | 952807 | **Prep Date:** | 08/23/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\090810A\0908F005.D | **Method ID:** | MJ132 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F006.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F006.D\0908F006c.d | | | **Vial:** | 16 |
| **Acqu Date:** | 09/08/2010 23:51 | **Quant Date:** | 09/09/2010 07:09 | **Dilution:** | 1.0 |
| **Run Type:** | LCS | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009459-1 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.14 +0.02 | 5.56 +0.01 | 2638533 | 2451783 | 107.41 | 115.00 | | | 46OK |
| | | | | %Recovery = | 43OK | 46OK | Limits = | 24-142 | |

## *Target Compounds*

**Final Conc. Units:** ug/L

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/L #1 | ug/L #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.40 +0.01 | 5.77 +0.01 | 1283269 | 1505490 | 62.41 | 82.52 | 0.125 | 0.165 | **0.165** |
| Tri-n-butyltin Cation | 7.40 | 6.71 +0.01 | 2356062 | 2245034 | 80.50 | 85.44 | 0.161 | 0.171 | **0.171** |
| Di-n-butyltin Cation | 8.40 | 7.66 | 2867758 | 2605590 | 74.05 | 76.82 | 0.148 | 0.154 | **0.154** |
| n-Butyltin Cation | 9.38 | 8.61 +0.01 | 3571511 | 3003145 | 80.57 | 78.02 | 0.161 | 0.156 | **0.161** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 500 mL | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 1 mL | **Unit Factor:** | 1 |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

# Lab Control Spike Summary Report

*Lab Control Spike Information*

*ListJoinID :* LJ11138

| | | | |
|---|---|---|---|
| **Data File:** | J:\GC26\DATA\090810A\0908F006.D\0908F006C.D | **Instrument:** | GC26 |
| **Lab ID:** | KWG1009459-1 | **Dilution:** | 1 |
| **Client ID:** | Lab Control Sample | **Units:** | ug/L |
| **Prod Code:** | Butyltins BUTYL | **Acqu Date:** | 09/08/2010 23:51 |
| **Matrix:** | WATER | **Quant Date:** | 09/09/2010 07:09 |

*Duplicate Lab Control Spike Information*

| | | | |
|---|---|---|---|
| **Data File:** | J:\GC26\DATA\090810A\0908F007.D\0908F007C.D | **Instrument:** | GC26 |
| **Lab ID:** | KWG1009459-2 | **Dilution:** | 1 |
| **Client ID:** | Duplicate Lab Control Sample | **Units:** | ug/L |
| **Prod Code:** | Butyltins BUTYL | **Acqu Date:** | 09/09/2010 00:08 |
| **Matrix:** | WATER | **Quant Date:** | 09/09/2010 07:09 |

| | LCS | | | DLCS | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter Name** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 0.165 | 0.500 | 33 | 0.208 | 0.500 | 42 | 24-104 | 23 | 30 |
| Tri-n-butyltin Cation | 0.171 | 0.446 | 38 | 0.205 | 0.446 | 46 | 30-120 | 18 | 30 |
| Di-n-butyltin Cation | 0.154 | 0.384 | 40 | 0.191 | 0.384 | 50 | 18-128 | 21 | 30 |
| n-Butyltin Cation | 0.161 | 0.312 | 52 | 0.215 | 0.312 | 69 | 40-165 | 29 | 30 |

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F006.D\FPD1A.CH Vial: 16
Signal #2 : J:\GC26\DATA\090810A\0908F006.D\FPD2B.CH
Acq On : 08 Sep 2010 11:51 pm Operator: CCotnam
Sample : KWG1009459-1 | LCS | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009459\1-LCS.H | F=1 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:20 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

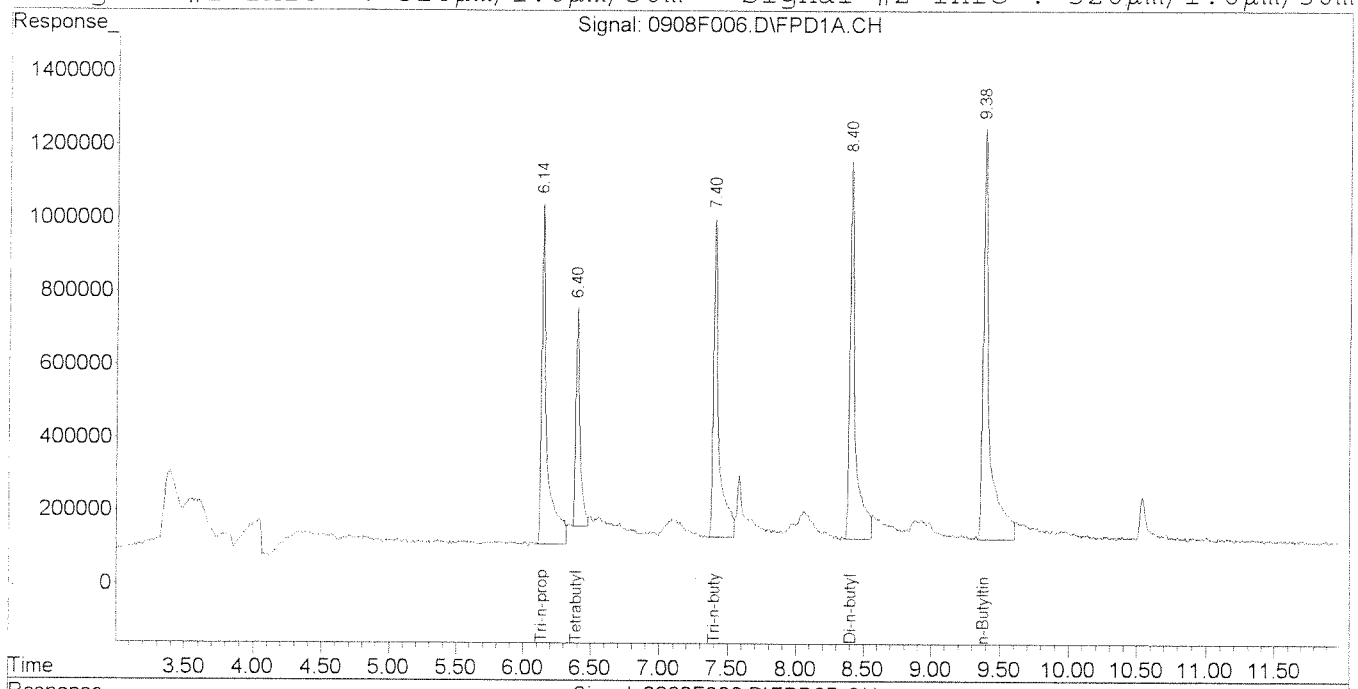
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL | |
|---|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | | |
| 1) S | Tri-n-propyltin | 6.14 | 5.56 | 2638533 | 2451783 | 107.412 | 114.997 | |
| | Target Compounds | | | | | | | |
| 2) | Tetrabutyltin | 6.40 | 5.77 | 1283269 | 1505490 | 62.412 | 82.524 | # |
| 3) | Tri-n-butyltin | 7.40 | 6.71 | 2356062 | 2245034 | 80.500 | 85.435 | |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 2867758 | 2605590 | 74.050 | 76.815 | |
| 5) | n-Butyltin | 9.38 | 8.61 | 3571511 | 3003145 | 80.565 | 78.015 | |

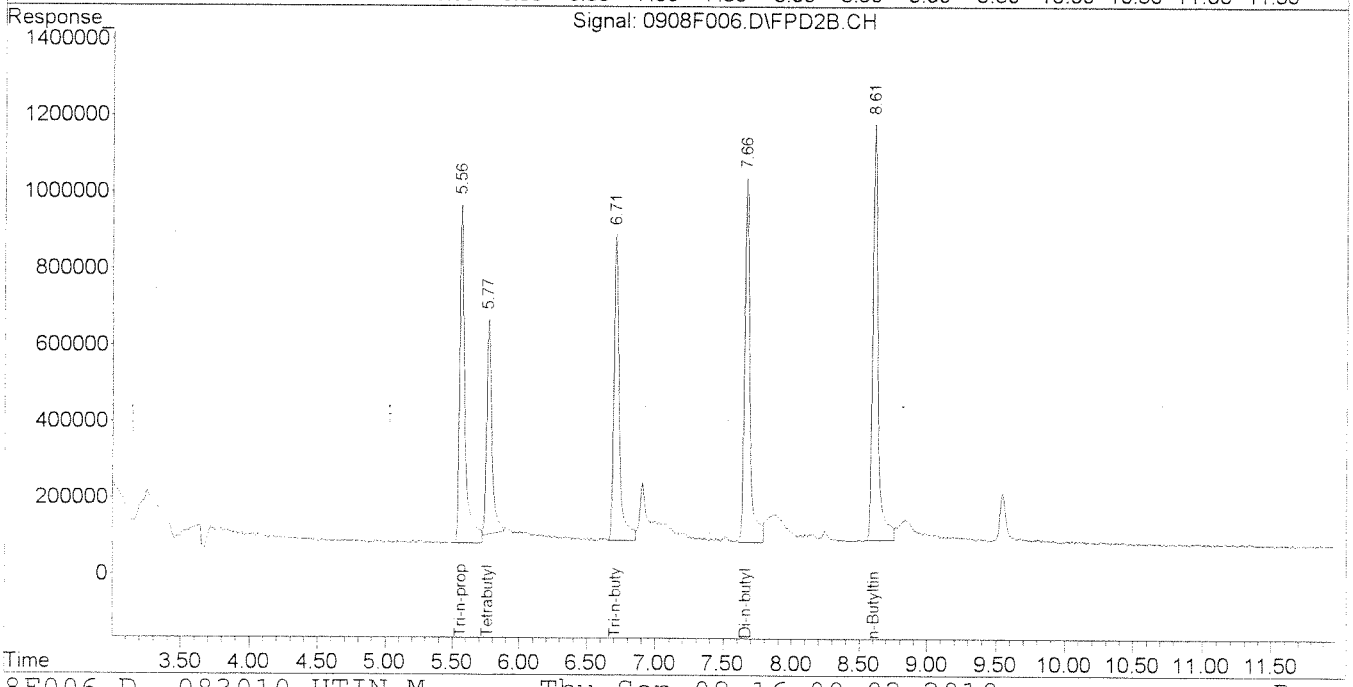
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\090810A\0908F006.D\FPD1A.CH Vial: 16
Signal #2 : J:\GC26\DATA\090810A\0908F006.D\FPD2B.CH
Acq On : 08 Sep 2010 11:51 pm Operator: CCotnam
Sample : KWG1009459-1 | LCS | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009459\1-LCS.H | F=1 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | 08/23/2010 |
| | | **Date Analyzed:** | 09/09/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | ug/L |
| **Lab Code:** | KWG1009459-2 | **Basis:** | NA |
| **File ID:** | J:\GC26\DATA\090810A\0908F007.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | EPA 3520C | **Extraction Lot:** | KWG1009459 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 500 mL | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **0.208** | | 0.050 | 0.038 | |
| **36643-28-4** | Tri-n-butyltin Cation | **0.205** | | 0.050 | 0.012 | |
| **14488-53-0** | Di-n-butyltin Cation | **0.191** | | 0.050 | 0.0073 | |
| **78763-54-9** | n-Butyltin Cation | **0.215** | | 0.050 | 0.029 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 59 | 24-142 | 09/09/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F007.D
**Lab ID:** KWG1009459-2
**RunType:** DLCS
**Matrix:** WATER

**Date Acquired:** 09/09/2010 00:08
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: M 9/9/10

Secondary Review: A 9/10/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F007.D\0908F007C.D
**Lab ID:** KWG1009459-2
**RunType:** DLCS
**Matrix:** WATER

**Date Acquired:** 09/09/2010 00:08
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**ListJoinID:** LJ11139

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/20/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | WATER |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | KWG1009459 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | EPA 3520C | | |
| **Prep Ref:** | 952808 | **Prep Date:** | 08/23/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\090810A\0908F005.D | **Method ID:** | MJ132 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F007.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F007.D\0908F007c.d | | | **Vial:** | 17 |
| **Acqu Date:** | 09/09/2010 00:08 | **Quant Date:** | 09/09/2010 07:09 | **Dilution:** | 1.0 |
| **Run Type:** | DLCS | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009459-2 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | | RT #2 | | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.14 | +0.02 | 5.57 | +0.02 | 3633598 | 3227625 | 147.92 | 151.39 | | | 59OK |
| | | | | | | %Recovery = | 59OK | 61OK | Limits = | 24-142 | |

## *Target Compounds*

**Final Conc. Units:** ug/L

| Parameter Name | RT #1 | | RT #2 | | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/L #1 | ug/L #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.40 | +0.01 | 5.77 | +0.01 | 1653993 | 1893690 | 80.44 | 103.80 | 0.161 | 0.208 | **0.208** |
| Tri-n-butyltin Cation | 7.41 | +0.01 | 6.71 | +0.01 | 2974602 | 2699867 | 101.63 | 102.74 | 0.203 | 0.205 | **0.205** |
| Di-n-butyltin Cation | 8.41 | +0.01 | 7.67 | +0.01 | 3689333 | 2911397 | 95.26 | 85.83 | 0.191 | 0.172 | **0.191** |
| n-Butyltin Cation | 9.39 | +0.01 | 8.61 | +0.01 | 4771734 | 3849277 | 107.64 | 100.00 | 0.215 | 0.200 | **0.215** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 500 mL | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 1 mL | **Unit Factor:** | 1 |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F007.D\FPD1A.CH Vial: 17
Signal #2 : J:\GC26\DATA\090810A\0908F007.D\FPD2B.CH
Acq On : 09 Sep 2010 12:08 am Operator: CCotnam
Sample : KWG1009459-2 | DLCS | Butyltins BUTYLTIN Inst : GC26
Misc : SEMIVOA GC\W1009459\2-DLCS.H | F=1 D=1 A Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:21 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

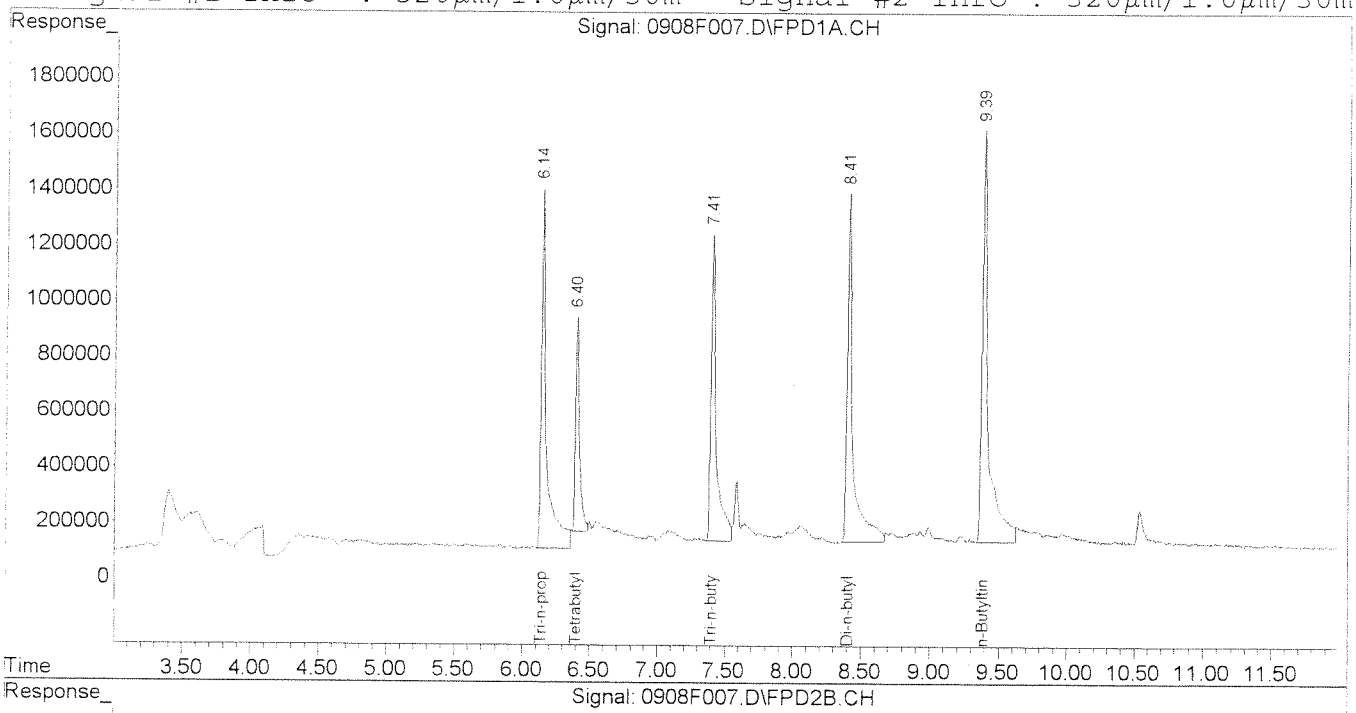
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL | |
|---|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | | |
| 1) S | Tri-n-propyltin | 6.14 | 5.57 | 3633598 | 3227625 | 147.920 | 151.387 | |
| | Target Compounds | | | | | | | |
| 2) | Tetrabutyltin | 6.40 | 5.77 | 1653993 | 1893690 | 80.442 | 103.804 | # |
| 3) | Tri-n-butyltin | 7.41 | 6.71 | 2974602 | 2699867 | 101.633 | 102.744 | |
| 4) | Di-n-butyltin | 8.41 | 7.67 | 3689333 | 2911397 | 95.264 | 85.830 | |
| 5) | n-Butyltin | 9.39 | 8.61 | 4771734 | 3849277 | 107.639 | 99.996 | |

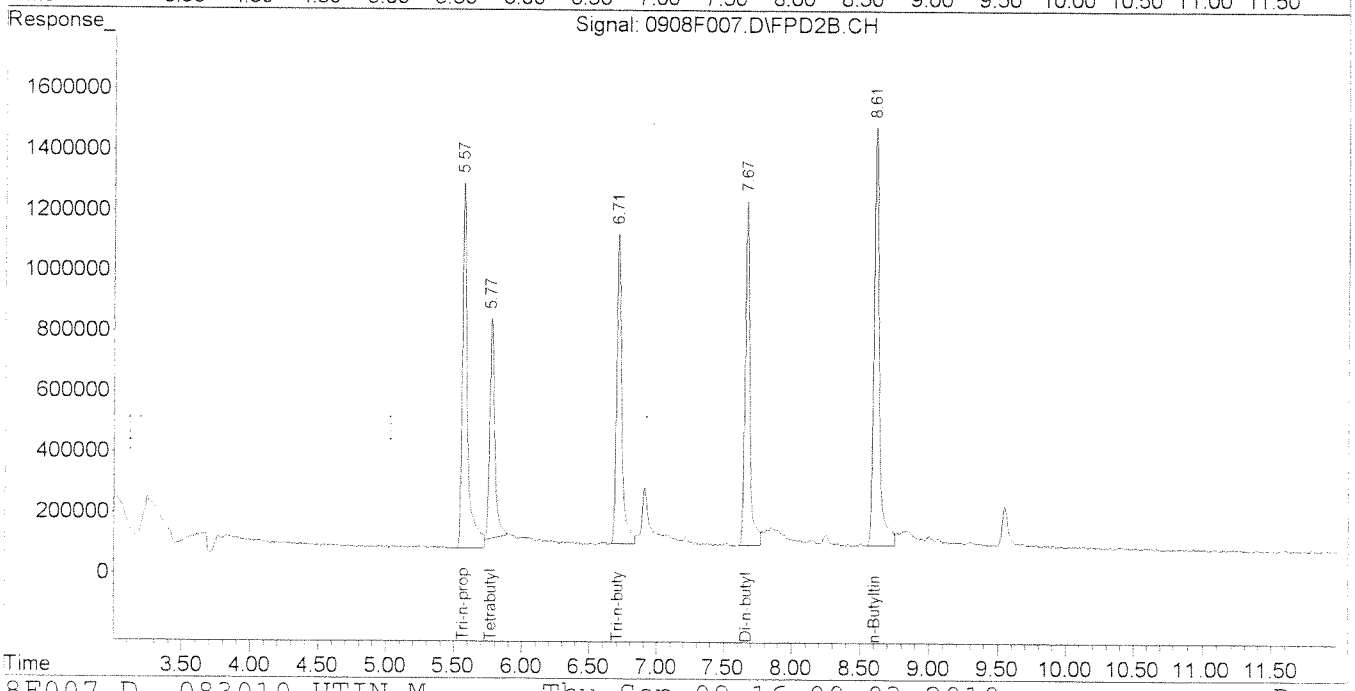
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\090810A\0908F007.D\FPD1A.CH Vial: 17
Signal #2 : J:\GC26\DATA\090810A\0908F007.D\FPD2B.CH
Acq On : 09 Sep 2010 12:08 am Operator: CCotnam
Sample : KWG1009459-2 | DLCS | Butyltins BUTYLTIN Inst : GC26
Misc : SEMIVOA GC\W1009459\2-DLCS.H | F=1 D=1 A Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC07C | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-001 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F021.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.16 g | **Column2:** | RTX-35 |
| **% Solids:** | 66.1 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 1.6 | U | 1.6 | 0.67 | |
| **36643-28-4** | Tri-n-butyltin Cation | **6.4** | | 1.6 | 0.65 | |
| **14488-53-0** | Di-n-butyltin Cation | **16** | | 1.6 | 0.29 | |
| **78763-54-9** | n-Butyltin Cation | **15** | | 1.6 | 0.40 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 70 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F021.D
**Lab ID:** K1008857-001
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:51
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/16/10

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F021.D\0915F021C.D
**Lab ID:** K1008857-001
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:51
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: _____

Secondary Review: _____

# *Quantitation Report*

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | V | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | 08/16/2010 | **Receive Date:** | 08/18/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | K1008857 |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953730 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | Butyltins (as cation) | **Report List ID:** | LJ11140 |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Report List** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F021.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F021.D\0915F021c.d | | | **Vial:** | 28 |
| **Acqu Date:** | 09/15/2010 23:51 | **Quant Date:** | 09/16/2010 13:13 | **Dilution:** | 1.0 |
| **Run Type:** | SMPL | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | K1008857-001 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.07 +0.01 | 5.59 +0.01 | 1780812 | 2015381 | 87.81 | 96.40 | | | 77OK |
| | | | | %Recovery = | 70OK | 77OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Dry Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0d | 0.0000 | 0.0000 | 0.67U | 0.67U | 0.67U |
| Tri-n-butyltin Cation | 7.32 +0.01 | 6.73 +0.01 | 503392 | 578935 | 21.21 | 23.10 | 6.4 | 6.9 | **6.9** |
| Di-n-butyltin Cation | 8.31 | 7.68 | 1621156m | 1763577m | 54.54 | 56.83 | 16 | 17 | **17** |
| n-Butyltin Cation | 9.28 +0.01 | 8.63 +0.01 | 1753528 | 1868683 | 48.74 | 50.74 | 15 | 15 | **15** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.16 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | 66.1 % | | |

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F021.D\FPD1A.CH Vial: 28
Signal #2 : J:\GC26\DATA\091510C\0915F021.D\FPD2B.CH
Acq On : 15 Sep 2010 11:51 pm Operator: CCotnam
Sample : K1008857-001 | LPRC07C Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:42 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | S | Tri-n-propyltin | 6.07 | 5.59 | 1780812 | 2015381 | 87.814 | 96.399 |
| | | Target Compounds | | | | | | |
| 3) | | Tri-n-butyltin | 7.32 | 6.73 | 503392 | 578935 | 21.206 | 23.095 |
| 4) | | Di-n-butyltin | 8.31 | 7.68 | 1621156 | 1763577 | 54.543m | 56.832m |
| 5) | | n-Butyltin | 9.28 | 8.63 | 1753528 | 1868683 | 48.737 | 50.744 |

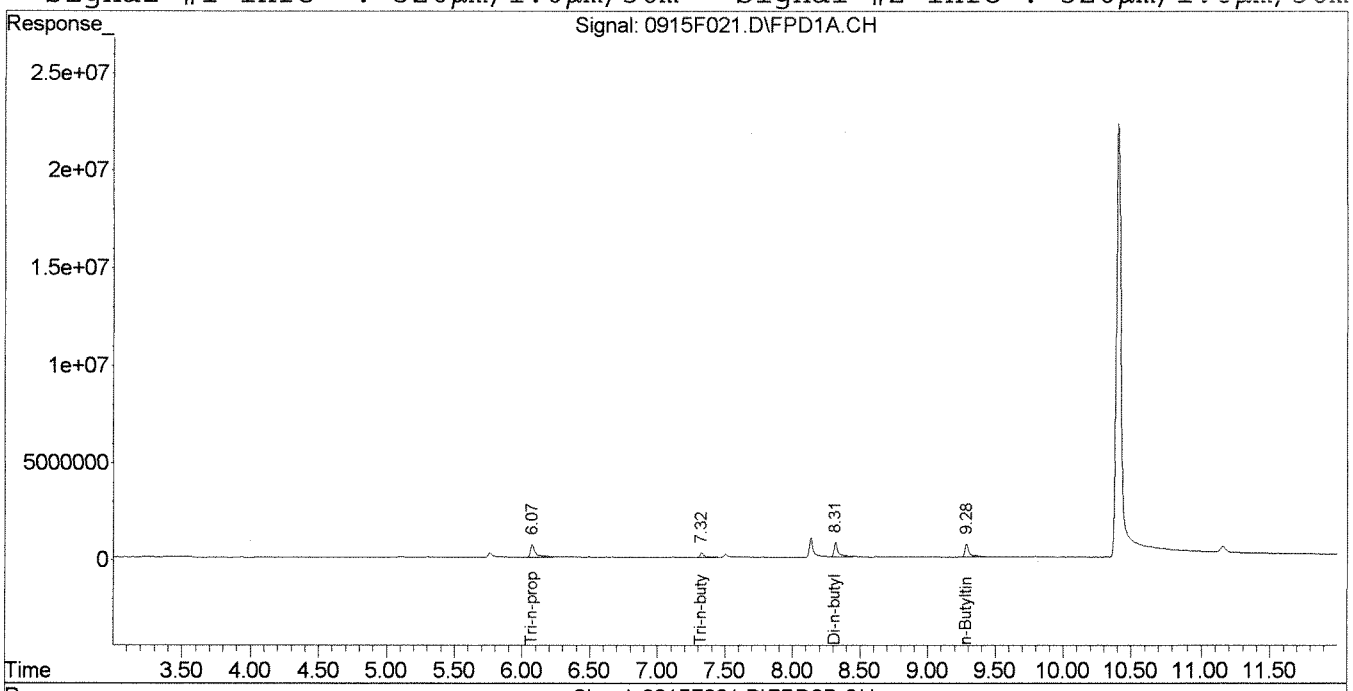
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

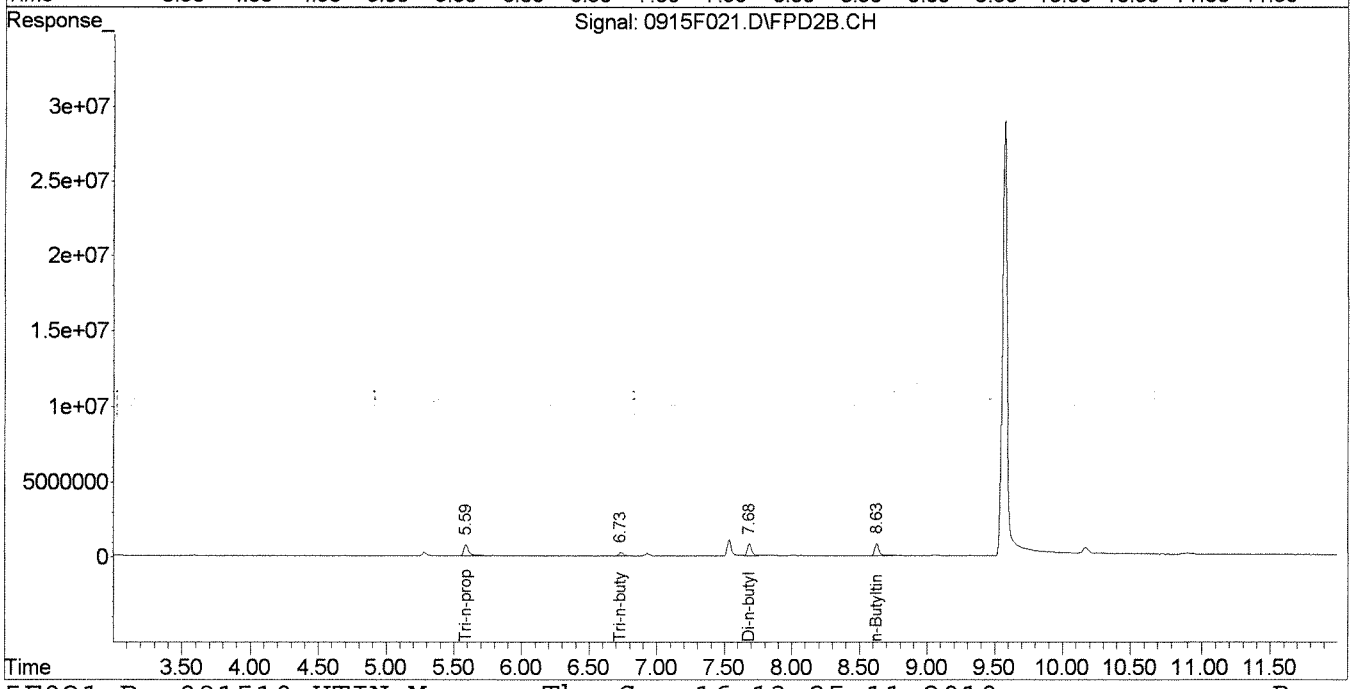
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F021.D\FPD1A.CH Vial: 28
Signal #2 : J:\GC26\DATA\091510C\0915F021.D\FPD2B.CH
Acq On : 15 Sep 2010 11:51 pm Operator: CCotnam
Sample : K1008857-001 | LPRC07C Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:13 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

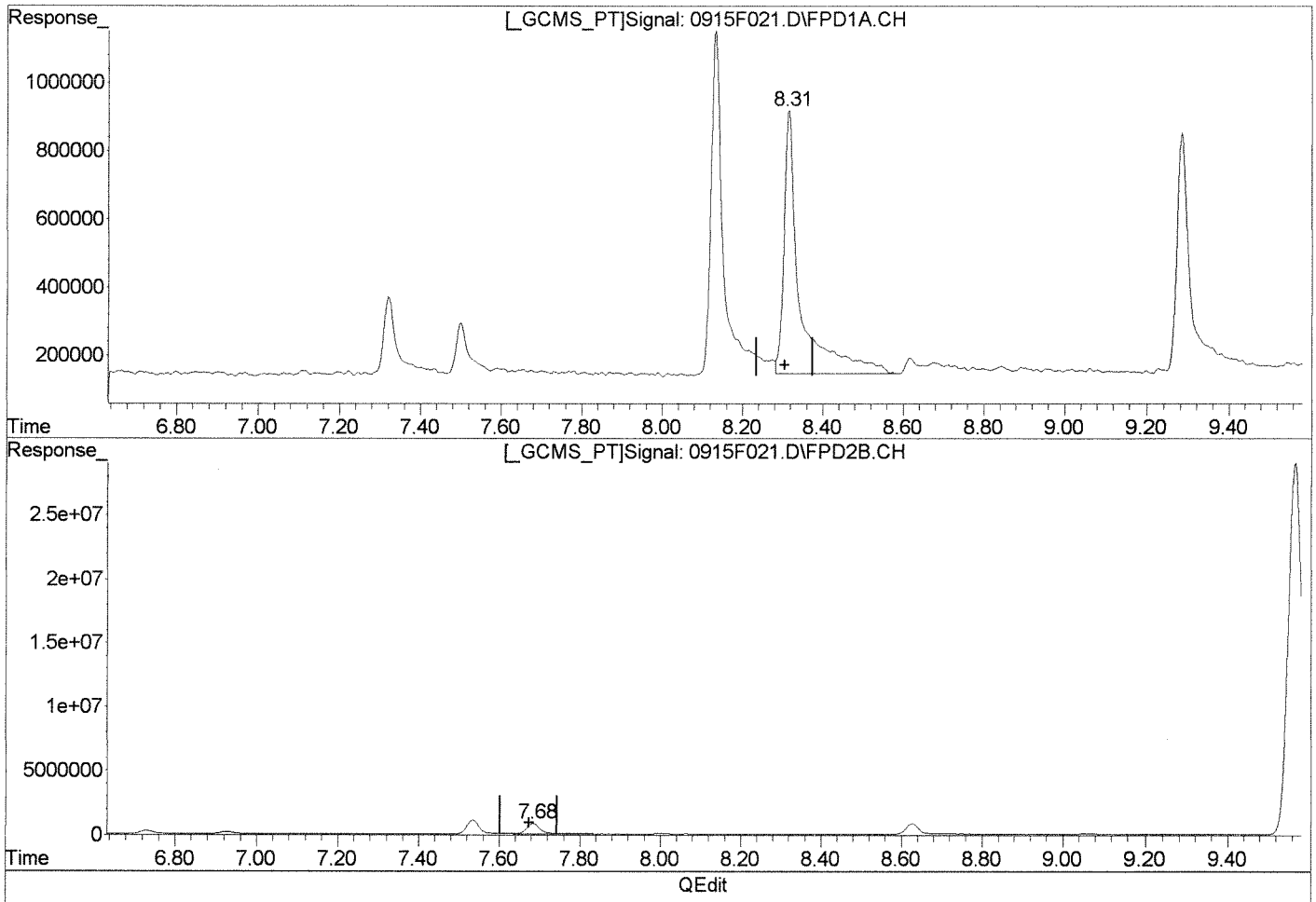


Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F021.D\FPD1A.CH Vial: 28
Signal #2 : J:\GC26\DATA\091510C\0915F021.D\FPD2B.CH
Acq On : 15 Sep 2010 11:51 pm Operator: CCotnam
Sample : K1008857-001 | LPRC07C Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




Manual Integration:

Before

(4) Di-n-butyltin

8.31min 72.817ng/mL

response 2164326

(4) Di-n-butyltin #2

7.68min 60.299ng/mL

response 1871152

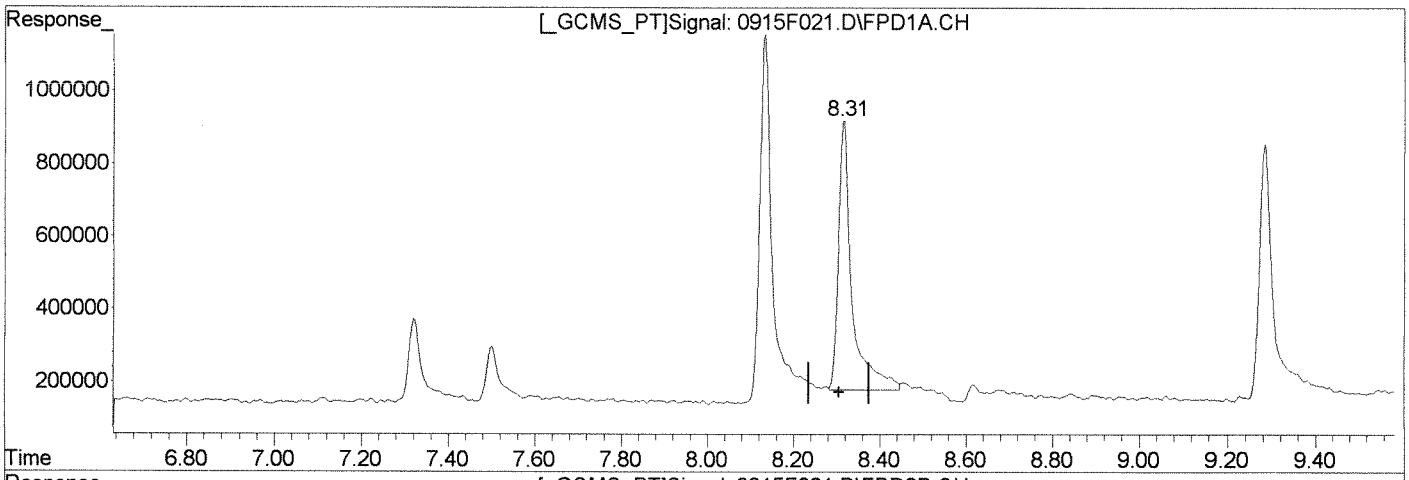
(+) = Expected Retention Time

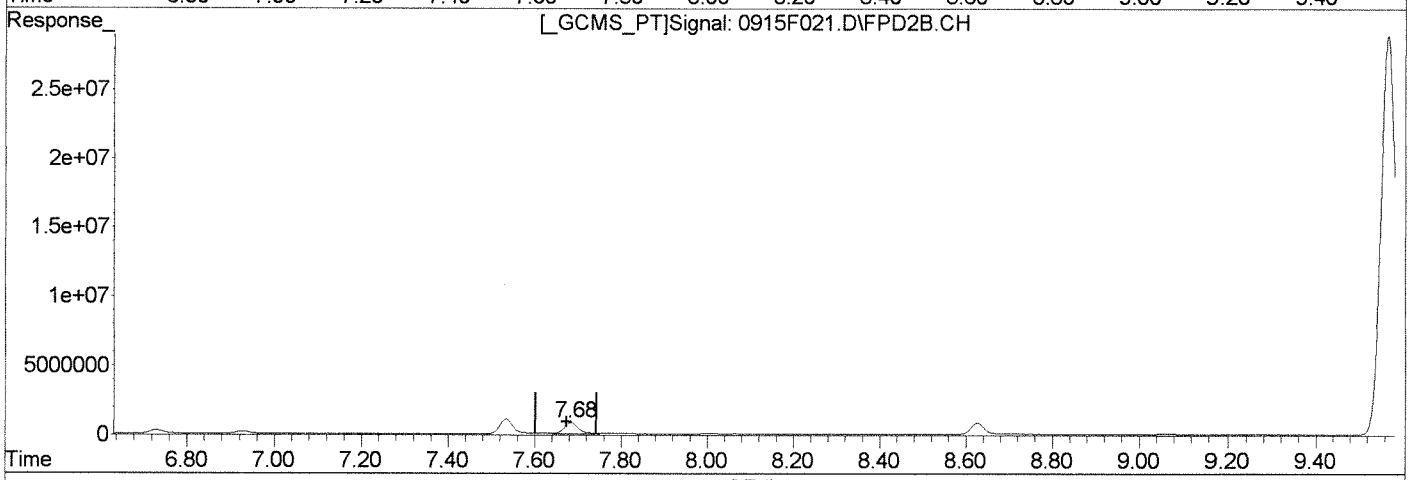
0915F021.D 091510-HTIN.M Thu Sep 16 13:15:23 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F021.D\FPD1A.CH Vial: 28
Signal #2 : J:\GC26\DATA\091510C\0915F021.D\FPD2B.CH
Acq On : 15 Sep 2010 11:51 pm Operator: CCotnam
Sample : K1008857-001 | LPRC07C Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(4) Di-n-butyltin
8.31min 54.543ng/mL m
response 1621156

(4) Di-n-butyltin #2
7.68min 56.832ng/mL m
response 1763577

Manual Integration:
After
Baseline/Shoulder
09/16/10

(+) = Expected Retention Time
0915F021.D 091510-HTIN.M Thu Sep 16 13:15:39 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | 08/16/2010 |
| **Sample Matrix:** | Sediment | **Date Received:** | 08/18/2010 |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/16/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | LPRC13A | **Units:** | ug/Kg |
| **Lab Code:** | K1008857-002 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F022.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.04 g | **Column2:** | RTX-35 |
| **% Solids:** | 72.9 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **1.7** | | 1.4 | 0.61 | |
| **36643-28-4** | Tri-n-butyltin Cation | **0.97** | J | 1.4 | 0.59 | |
| **14488-53-0** | Di-n-butyltin Cation | **6.0** | | 1.4 | 0.27 | |
| **78763-54-9** | n-Butyltin Cation | **7.3** | P | 1.4 | 0.36 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 63 | 18-95 | 09/16/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F022.D
**Lab ID:** K1008857-002
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/16/2010 00:08
**Date Quantitated:** 09/16/2010 13:14
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F022.D\0915F022C.D
**Lab ID:** K1008857-002
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/16/2010 00:08
**Date Quantitated:** 09/16/2010 13:14
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: _____

Secondary Review: _____

# *Quantitation Report*

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | V | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | 08/16/2010 | **Receive Date:** | 08/18/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | K1008857 |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953731 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | Butyltins (as cation) | **Report List ID:** | LJ11140 |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Report List** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F022.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F022.D\0915F022c.d | | | **Vial:** | 29 |
| **Acqu Date:** | 09/16/2010 00:08 | **Quant Date:** | 09/16/2010 13:14 | **Dilution:** | 1.0 |
| **Run Type:** | SMPL | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | K1008857-002 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | | RT #2 | | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.07 | +0.01 | 5.59 | +0.01 | 1602509 | 1796883 | 79.02 | 85.95 | | | 69OK |
| | | | | | | %Recovery = | 63OK | 69OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Dry Weight

| Parameter Name | RT #1 | | RT #2 | | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.30 | -0.02 | 5.80 | +0.02 | 99963 | 137786m | 6.18 | 7.61 | 1.7 | 2.1 | **2.1** |
| Tri-n-butyltin Cation | 7.32 | +0.01 | 6.73 | +0.01 | 83779 | 106914 | 3.53 | 4.27 | 0.97J | 1.2J | **1.2**J |
| Di-n-butyltin Cation | 8.31 | | 7.68 | | 659298m | 684994m | 22.18 | 22.07 | 6.1 | 6.0 | **6.1** |
| n-Butyltin Cation | 9.28 | +0.01 | 8.63 | +0.01 | 953641 | 1539226 | 26.51 | 41.80 | 7.3 | 11 | **11**P |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.04 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | 72.9 % | | |

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:42 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.07 | 5.59 | 1602509 | 1796883 | 79.021 | 85.948 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.30 | 5.80 | 99963 | 137786 | 6.184 | 7.611m |
| 3) | Tri-n-butyltin | 7.32 | 6.73 | 83779 | 106914 | 3.529 | 4.265 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 659298 | 684994 | 22.182m | 22.074m |
| 5) | n-Butyltin | 9.28 | 8.63 | 953641 | 1539226 | 26.505 | 41.797 # |

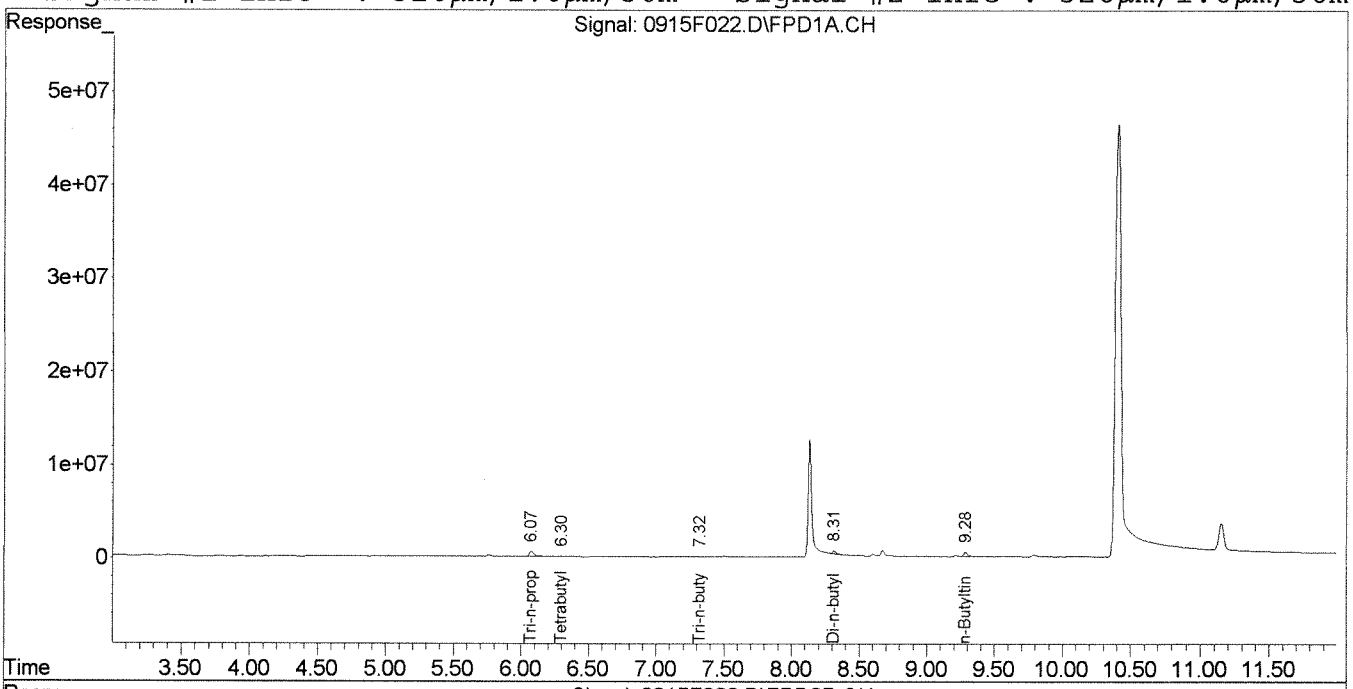
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

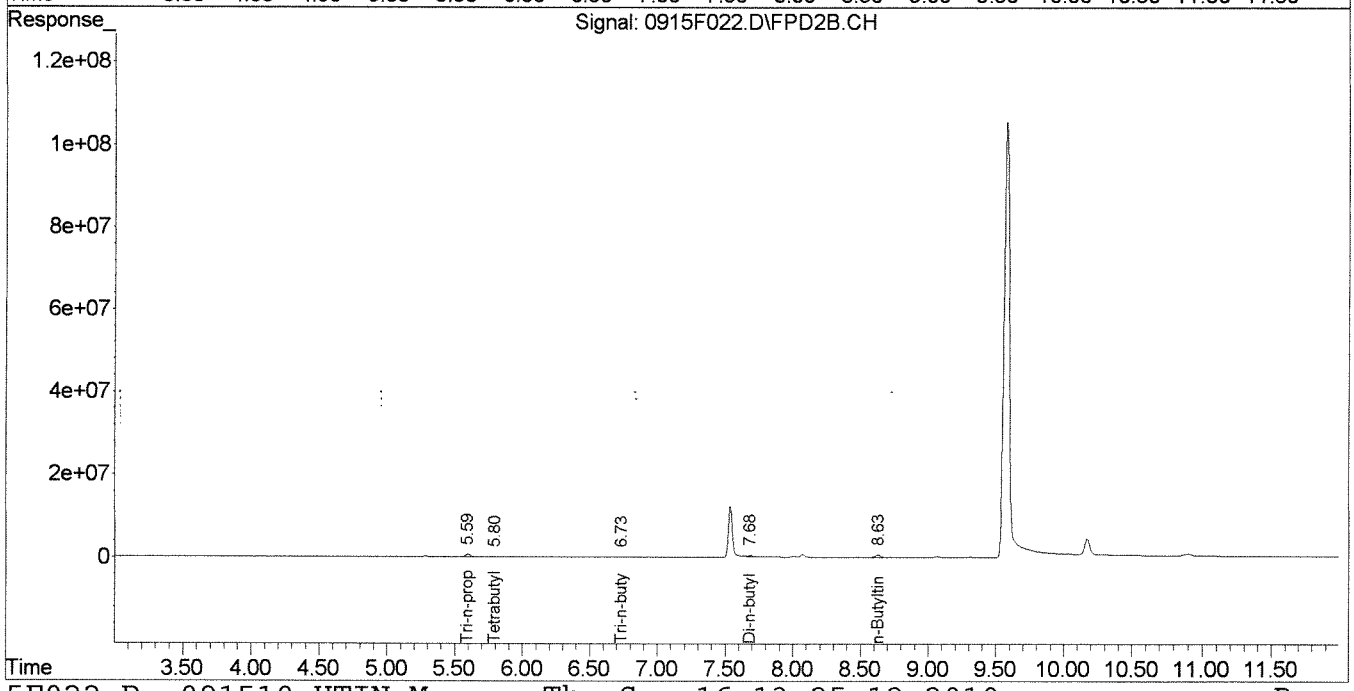
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:14 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

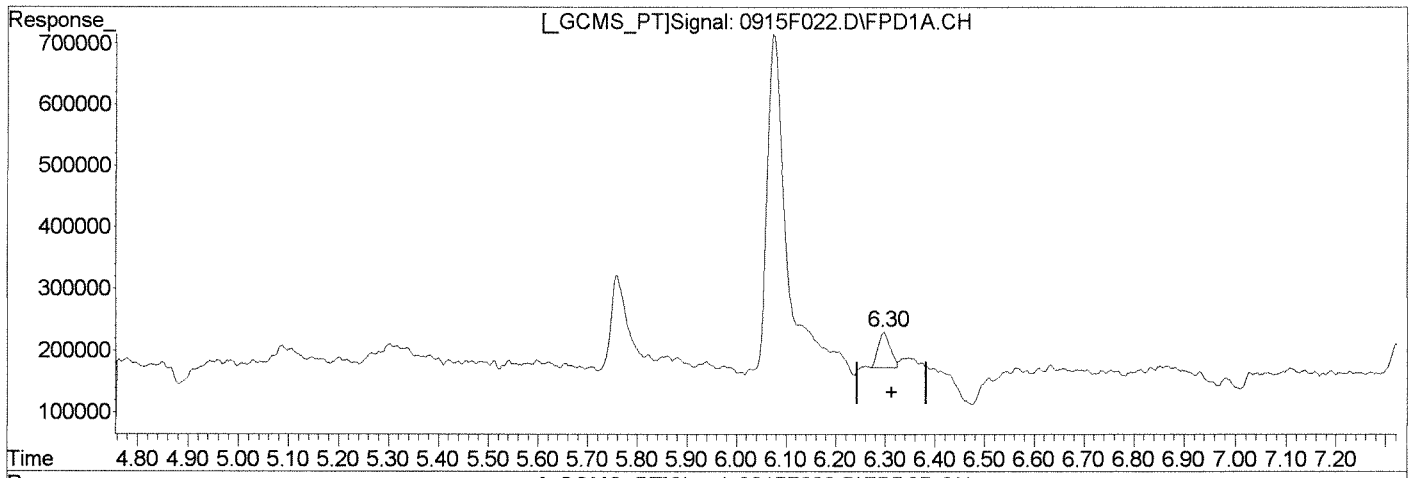


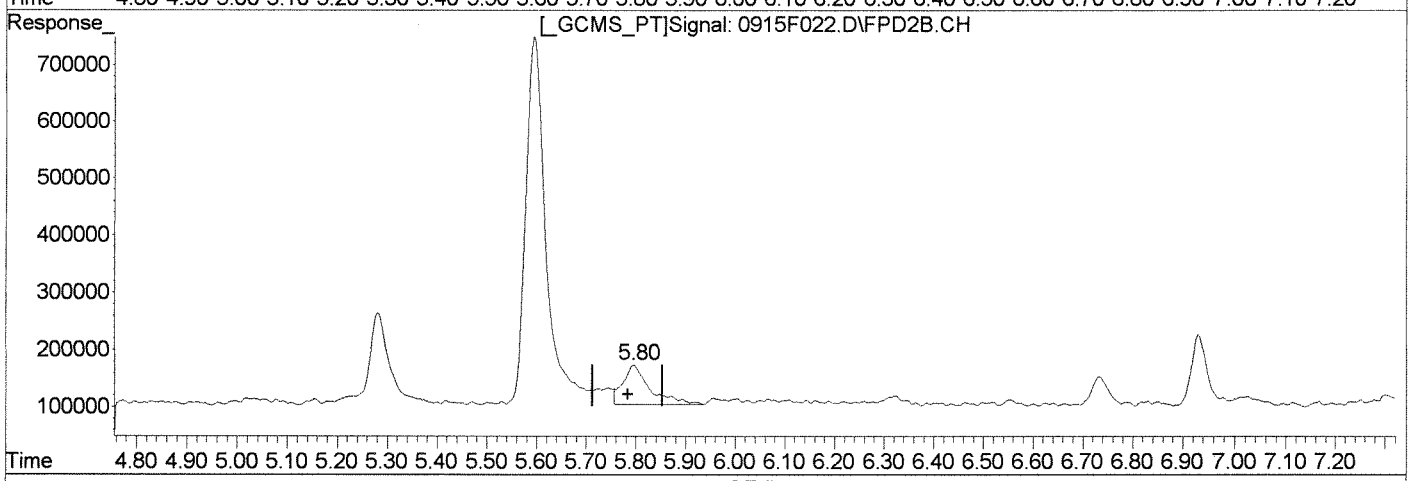



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

Manual Integration:

Before

(2) Tetrabutyltin

6.30min 6.184ng/mL

response 99963

(2) Tetrabutyltin #2

5.80min 14.029ng/mL

response 253970

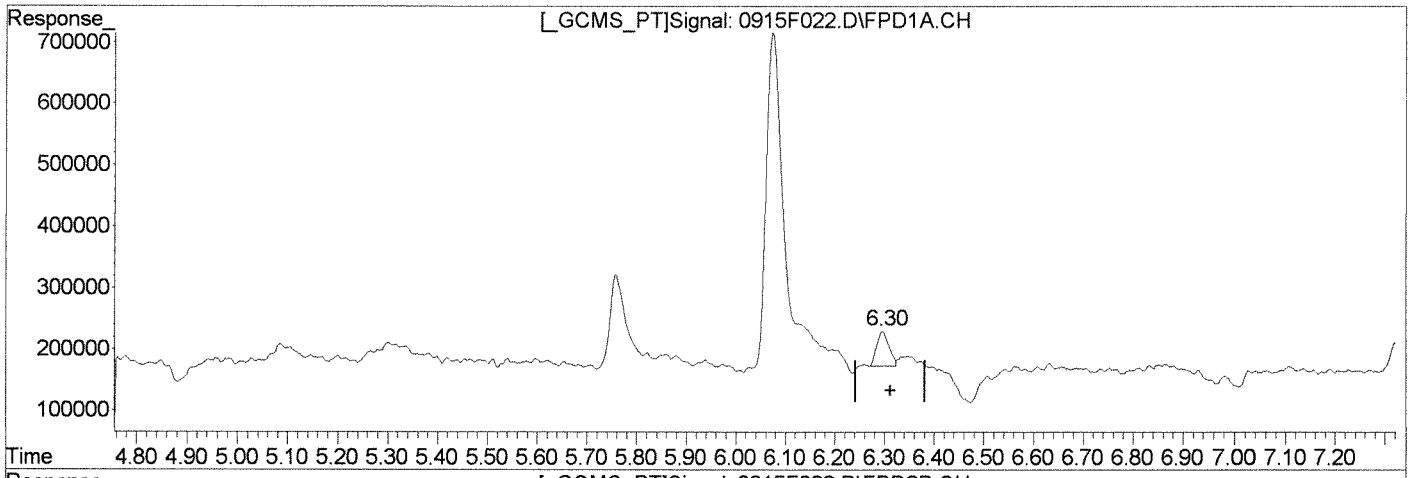
(+) = Expected Retention Time

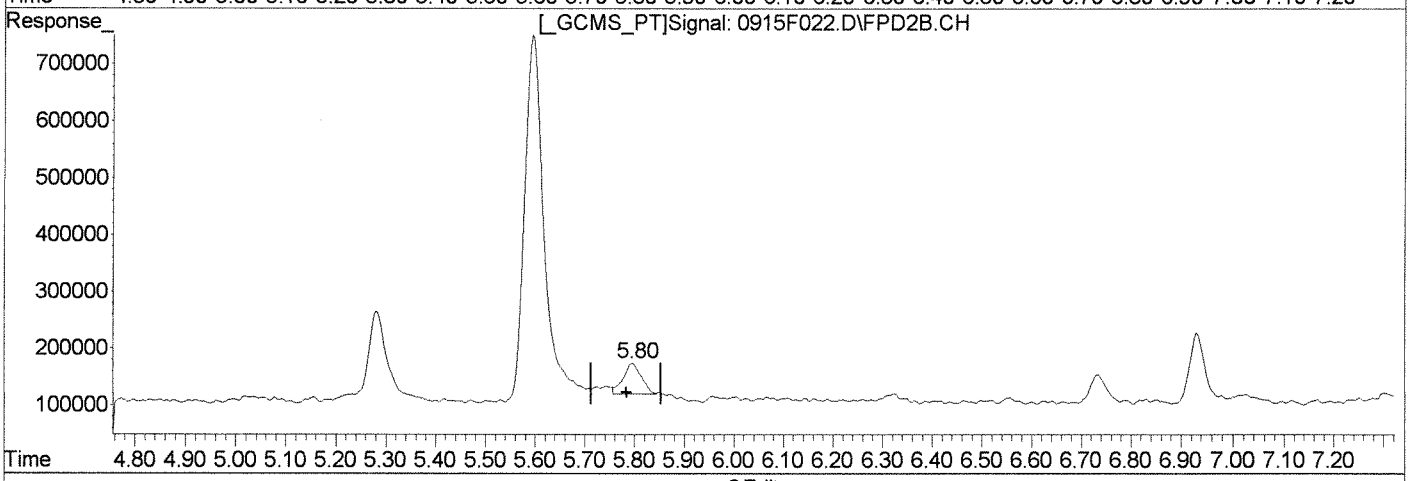
0915F022.D 091510-HTIN.M Thu Sep 16 13:15:51 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin
6.30min 6.184ng/mL
response 99963

(2) Tetrabutyltin #2
5.80min 7.611ng/mL m
response 137786

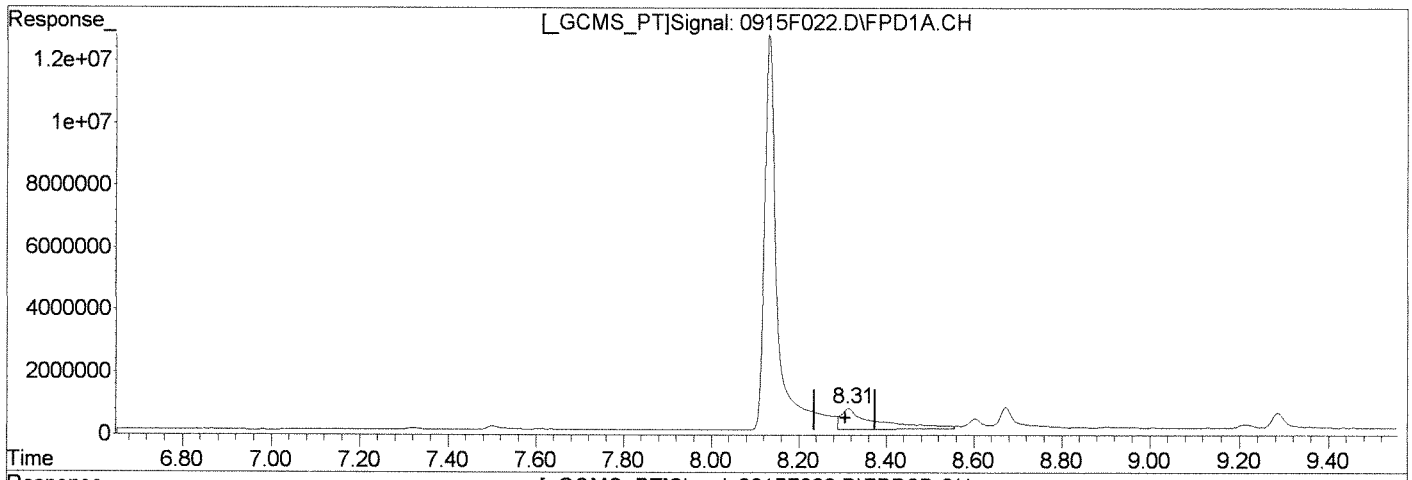
Manual Integration:
After
Baseline/Shoulder
09/16/10

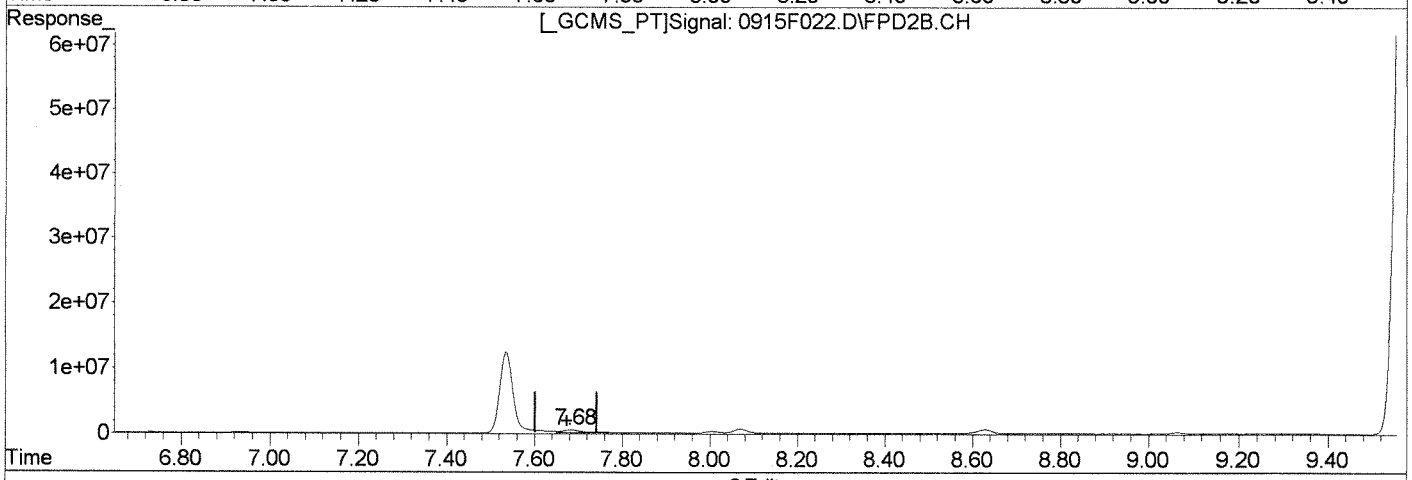
(+) = Expected Retention Time
0915F022.D 091510-HTIN.M Thu Sep 16 13:15:59 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

Manual Integration:

Before

(4) Di-n-butyltin

8.31min 121.752ng/mL

response 3618784

(4) Di-n-butyltin #2

7.68min 53.681ng/mL

response 1665790

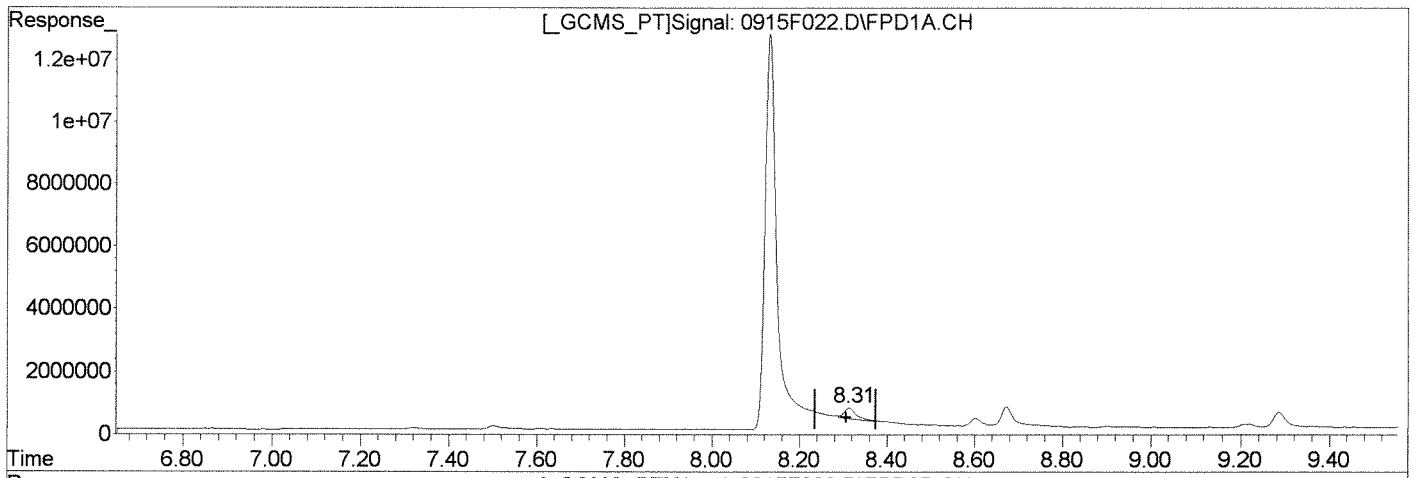
(+) = Expected Retention Time

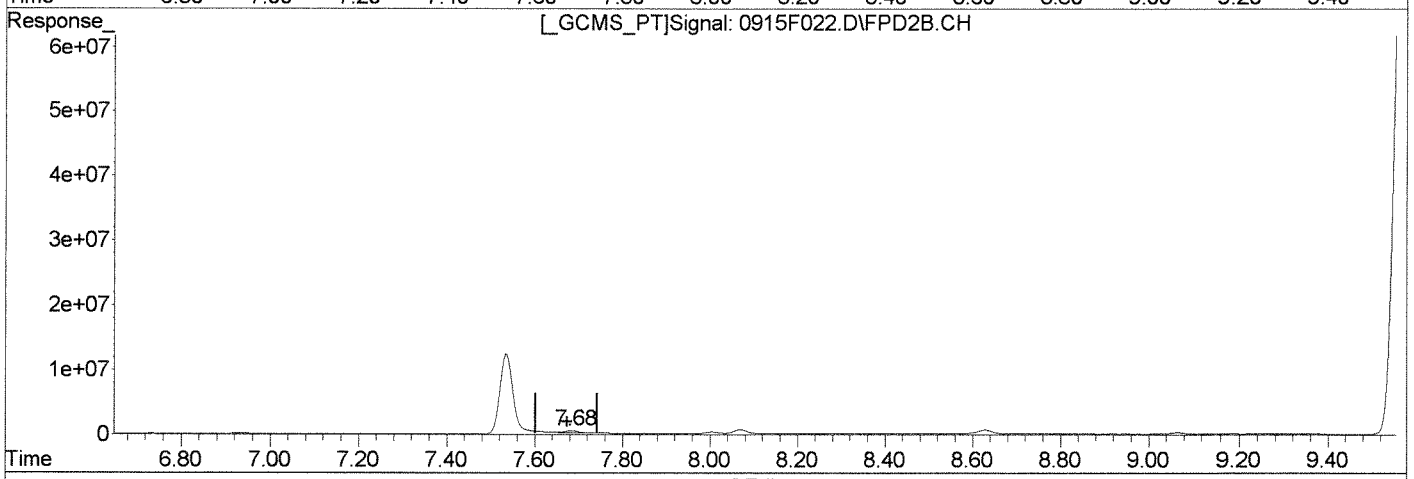
0915F022.D 091510-HTIN.M Thu Sep 16 13:16:07 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F022.D\FPD1A.CH Vial: 29
Signal #2 : J:\GC26\DATA\091510C\0915F022.D\FPD2B.CH
Acq On : 16 Sep 2010 12:08 am Operator: CCotnam
Sample : K1008857-002 | LPRC13A Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\088 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(4) Di-n-butyltin
8.31min 22.182ng/mL m
response 659298

(4) Di-n-butyltin #2
7.68min 22.074ng/mL m
response 684994

Manual Integration:
After
Baseline/Shoulder
09/16/10

(+) = Expected Retention Time
0915F022.D 091510-HTIN.M Thu Sep 16 13:16:17 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG1009567-4 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F014.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.44 g | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.98 | U | 0.98 | 0.44 | |
| 36643-28-4 | Tri-n-butyltin Cation | 0.98 | U | 0.98 | 0.43 | |
| 14488-53-0 | Di-n-butyltin Cation | 0.98 | U | 0.98 | 0.19 | |
| 78763-54-9 | n-Butyltin Cation | 0.98 | U | 0.98 | 0.26 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 57 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F014.D
**Lab ID:** KWG1009567-4
**RunType:** MB
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 21:54
**Date Quantitated:** 09/16/2010 13:11
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F014.D\0915F014C.D
**Lab ID:** KWG1009567-4
**RunType:** MB
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 21:54
**Date Quantitated:** 09/16/2010 13:11
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/16/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953740 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F014.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F014.D\0915F014c.d | | | **Vial:** | 21 |
| **Acqu Date:** | 09/15/2010 21:54 | **Quant Date:** | 09/16/2010 13:11 | **Dilution:** | 1.0 |
| **Run Type:** | MB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009567-4 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.07 +0.01 | 5.58 | 1436873 | 1632853 | 70.85 | 78.10 | | | 62OK |
| | | | | %Recovery = | 57OK | 62OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Wet Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | 0.44U | 0.44U | 0.44U |
| Tri-n-butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | 0.43U | 0.43U | 0.43U |
| Di-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | 0.19U | 0.19U | 0.19U |
| n-Butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | 0.26U | 0.26U | 0.26U |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.44 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F014.D\FPD1A.CH Vial: 21
Signal #2 : J:\GC26\DATA\091510C\0915F014.D\FPD2B.CH
Acq On : 15 Sep 2010 9:54 pm Operator: CCotnam
Sample : KWG1009567-4 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009567\4-MB.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:39 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

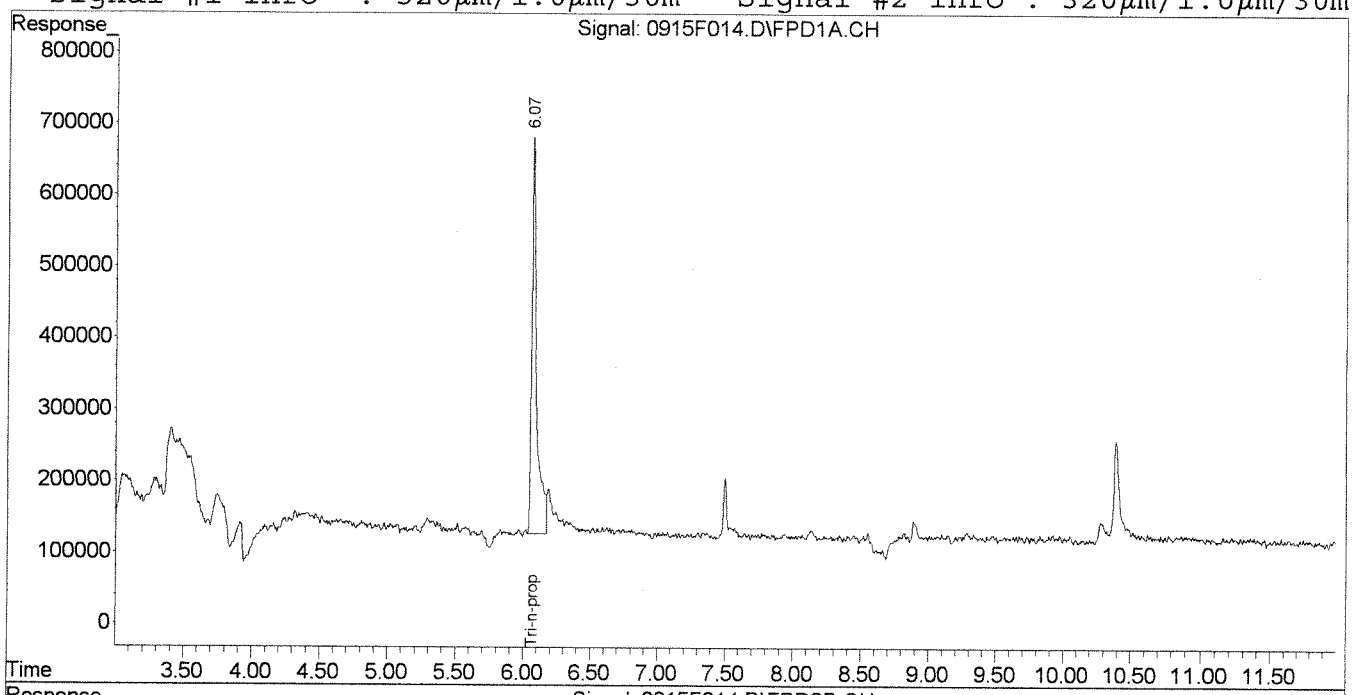
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tri-n-propyltin | 6.07 | 5.58 | 1436873 | 1632853 | 70.854 | 78.102 |
| Target Compounds | | | | | | |

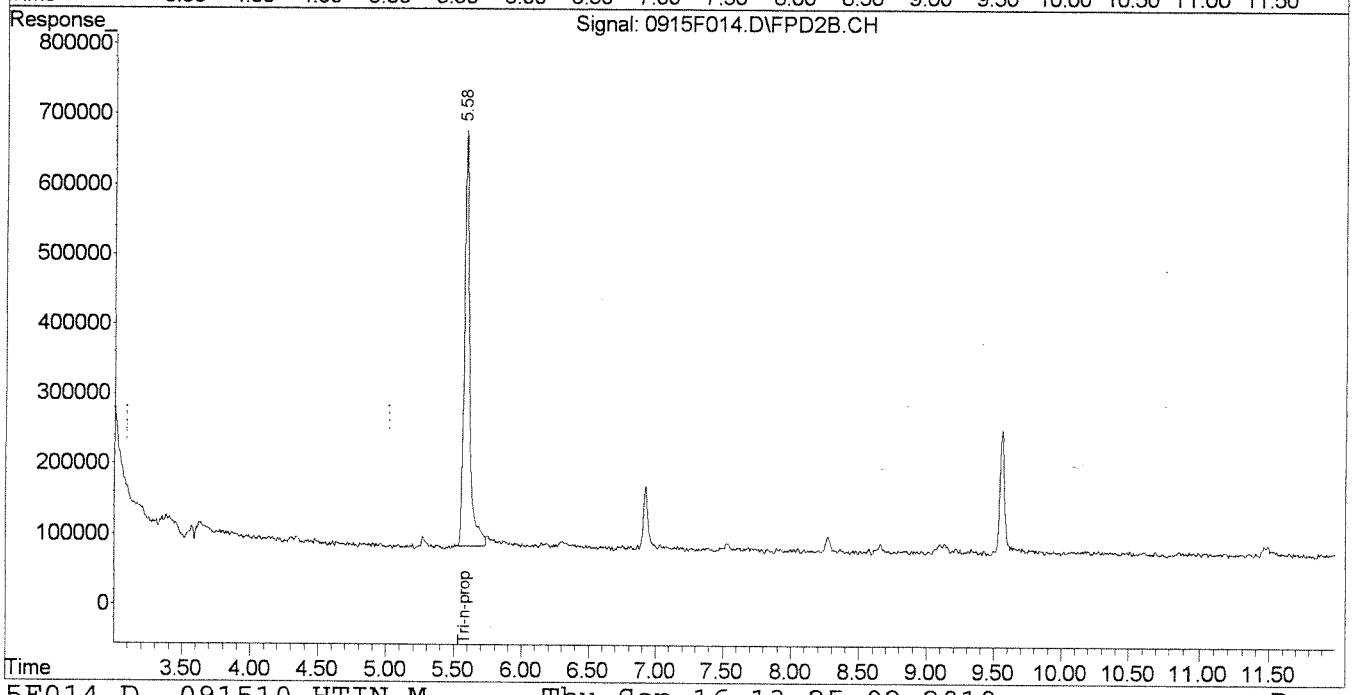
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F014.D\FPD1A.CH Vial: 21
Signal #2 : J:\GC26\DATA\091510C\0915F014.D\FPD2B.CH
Acq On : 15 Sep 2010 9:54 pm Operator: CCotnam
Sample : KWG1009567-4 | MB | Butyltins BUTYLTINS_ Inst : GC26
Misc : SEMIVOA GC\W1009567\4-MB.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:11 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | ug/Kg |
| **Lab Code:** | K1008775-002 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F017.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.33 g | **Column2:** | RTX-35 |
| **% Solids:** | 66.1 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **0.71** | J | 1.5 | 0.66 | |
| 36643-28-4 | Tri-n-butyltin Cation | 1.5 | U | 1.5 | 0.64 | |
| 14488-53-0 | Di-n-butyltin Cation | 1.5 | U | 1.5 | 0.29 | |
| 78763-54-9 | n-Butyltin Cation | 1.5 | U | 1.5 | 0.39 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 65 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F017.D
**Lab ID:** K1008775-002
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 22:44
**Date Quantitated:** 09/16/2010 13:12
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F017.D\0915F017C.D
**Lab ID:** K1008775-002
**RunType:** SMPL
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 22:44
**Date Quantitated:** 09/16/2010 13:12
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Method Blank | NA | NA | NA | x | |
| MB Surrogate Recovery | NA | NA | NA | x | |
| Lab Control Spike | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

Printed: 09/16/2010 13:57:41
u:\Stealth\Crystal.rpt\except2.rpt

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | V | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | 08/10/2010 | **Receive Date:** | 08/17/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | K1008775 |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953728 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | Butyltins (as cation) | **Report List ID:** | LJ11140 |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Report List** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F017.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F017.D\0915F017c.d | | | **Vial:** | 24 |
| **Acqu Date:** | 09/15/2010 22:44 | **Quant Date:** | 09/16/2010 13:12 | **Dilution:** | 1.0 |
| **Run Type:** | SMPL | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | K1008775-002 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.08 +0.02 | 5.60 +0.02 | 1623209 | 1690999 | 80.04 | 80.88 | | | 65OK |
| | | | | %Recovery = | 64OK | 65OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Dry Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.30 -0.02 | 5.79 +0.01 | 54098 | 43305m | 3.35 | 2.39 | 1.0J | 0.71J | **1.0**J |
| Tri-n-butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | 0.64U | 0.64U | 0.64U |
| Di-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | 0.29U | 0.29U | 0.29U |
| n-Butyltin Cation | 9.28 +0.01 | 8.62 | 36140 | 109126 | 1.00 | 2.96 | 0.39U | 0.88J | 0.39U |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.33 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | 66.1 % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F017.D\FPD1A.CH Vial: 24
Signal #2 : J:\GC26\DATA\091510C\0915F017.D\FPD2B.CH
Acq On : 15 Sep 2010 10:44 pm Operator: CCotnam
Sample : K1008775-002 | LA-5-Comp Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\087 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:40 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | S | Tri-n-propyltin | 6.08 | 5.60 | 1623209 | 1690999 | 80.042 | 80.883 |
| | | Target Compounds | | | | | | |
| 2) | | Tetrabutyltin | 6.30 | 5.79 | 54098 | 43305 | 3.346 | 2.392m# |
| 5) | | n-Butyltin | 9.28 | 8.62 | 36140 | 109126 | 1.004 | 2.963 # |

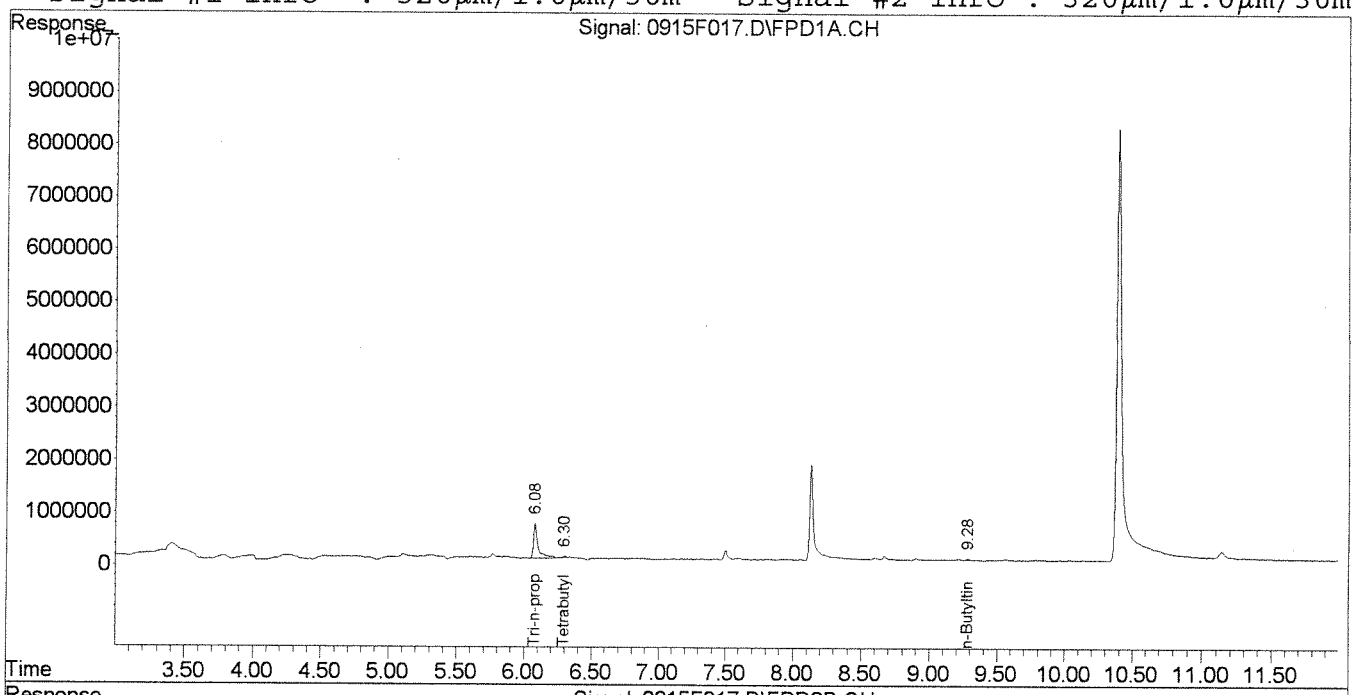
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

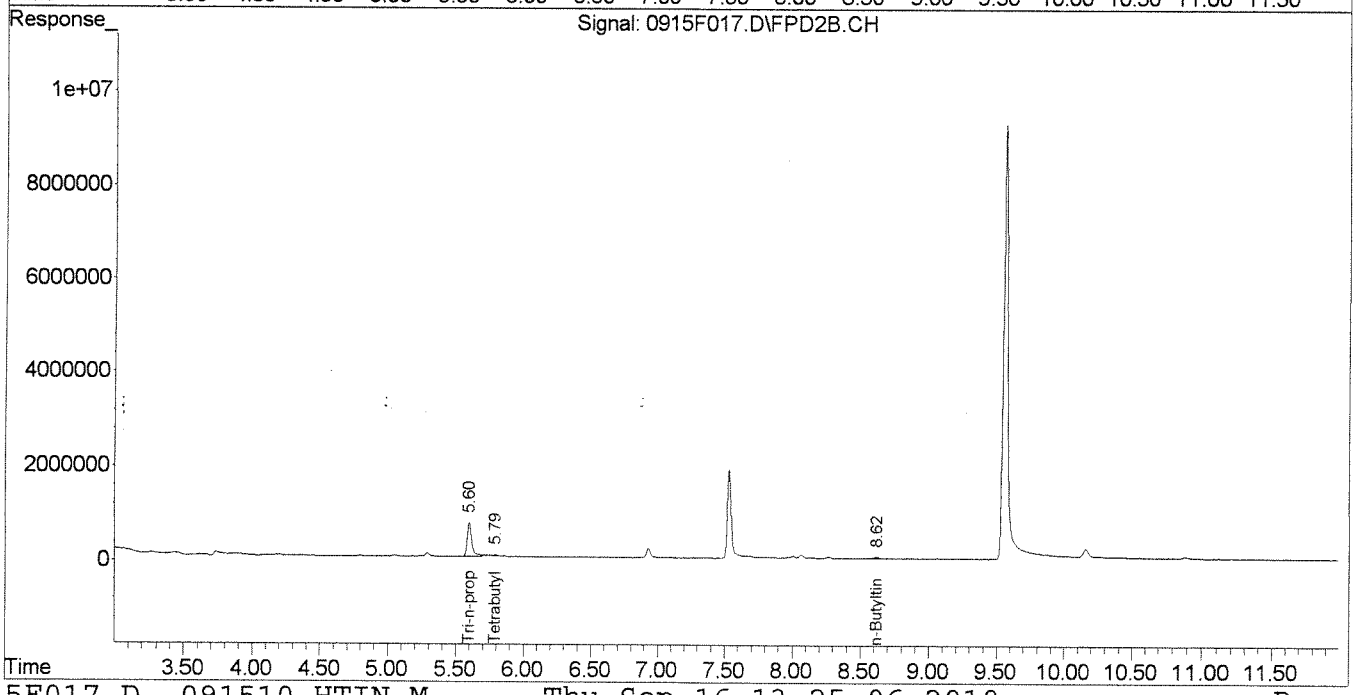
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F017.D\FPD1A.CH Vial: 24
Signal #2 : J:\GC26\DATA\091510C\0915F017.D\FPD2B.CH
Acq On : 15 Sep 2010 10:44 pm Operator: CCotnam
Sample : K1008775-002 | LA-5-Comp Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\087 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:12 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

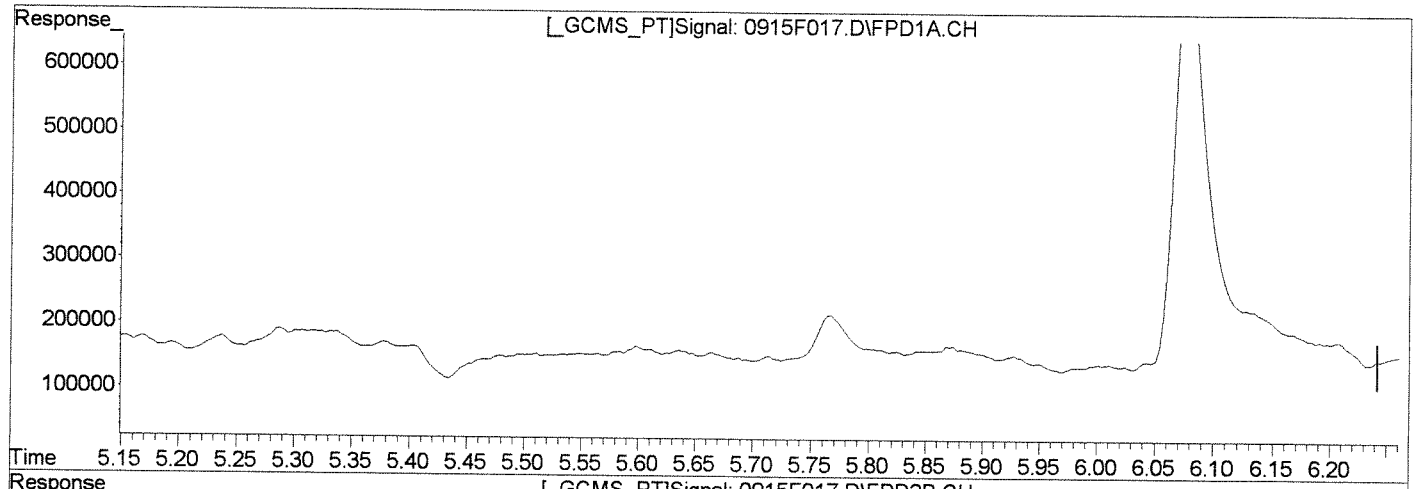


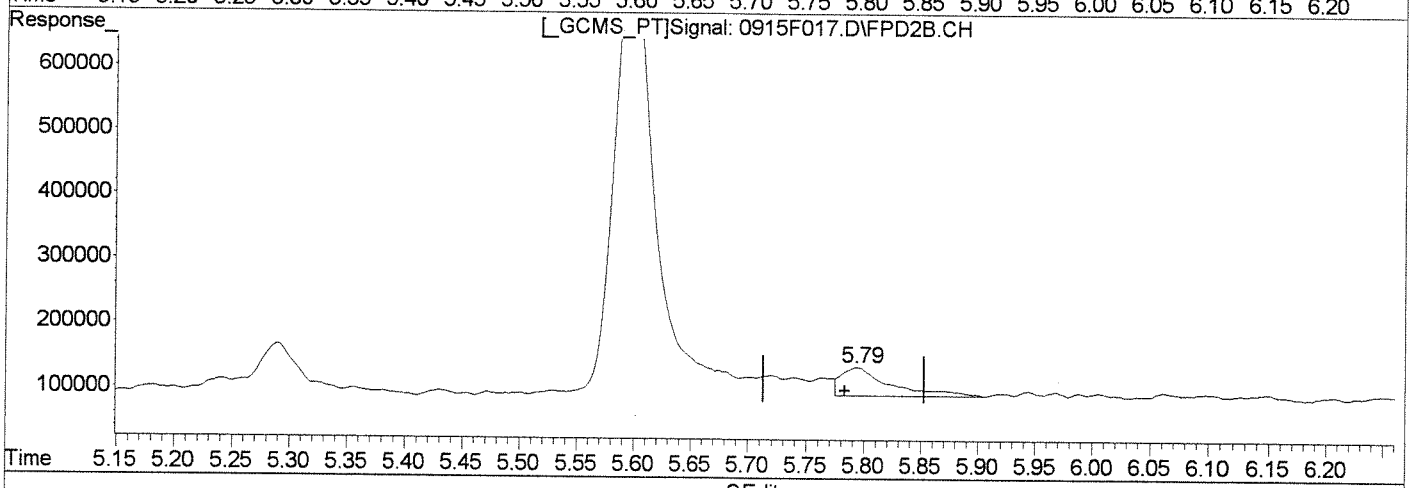



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F017.D\FPD1A.CH Vial: 24
Signal #2 : J:\GC26\DATA\091510C\0915F017.D\FPD2B.CH
Acq On : 15 Sep 2010 10:44 pm Operator: CCotnam
Sample : K1008775-002 | LA-5-Comp Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\087 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin

6.30min 3.346ng/mL

response 54098

(2) Tetrabutyltin #2

5.79min 7.094ng/mL

response 128420

Manual Integration:

Before

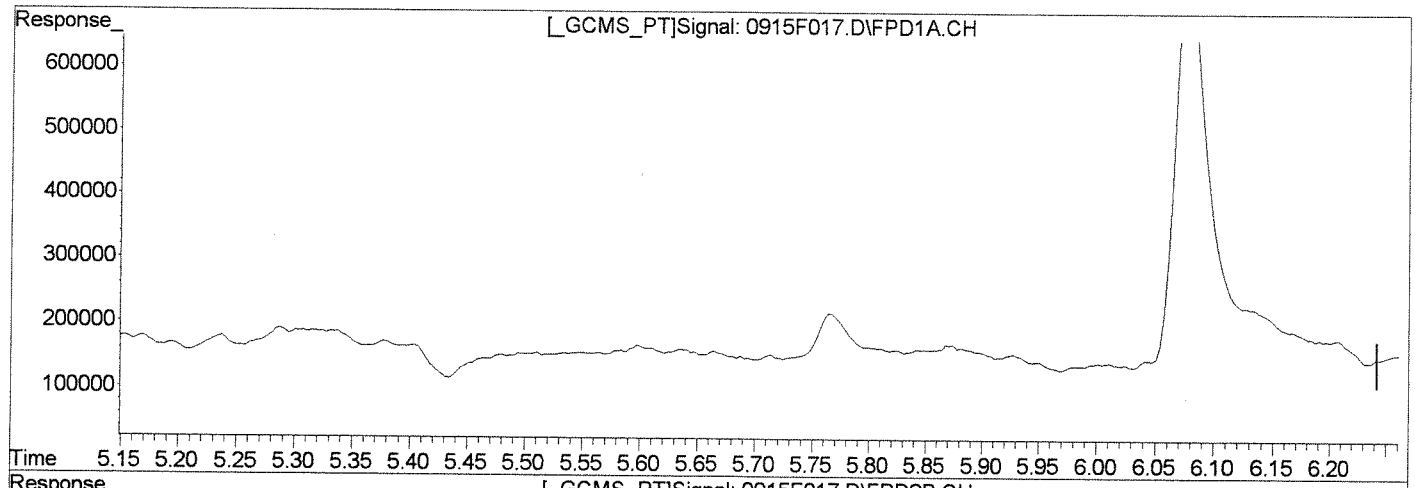
(+) = Expected Retention Time

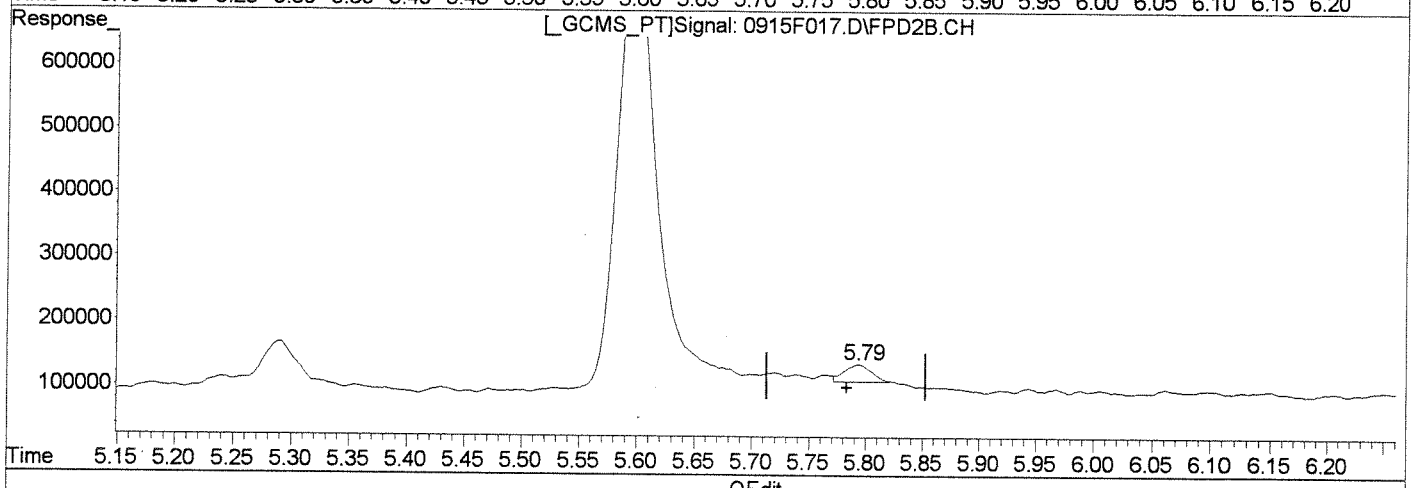
0915F017.D 091510-HTIN.M Thu Sep 16 13:13:50 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F017.D\FPD1A.CH Vial: 24
Signal #2 : J:\GC26\DATA\091510C\0915F017.D\FPD2B.CH
Acq On : 15 Sep 2010 10:44 pm Operator: CCotnam
Sample : K1008775-002 | LA-5-Comp Inst : GC26
Misc : KELSO\SEMIVOA GC\BUTYLTINS-BUTYLTINS\087 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin
6.30min 3.346ng/mL
response 54098

(2) Tetrabutyltin #2
5.79min 2.392ng/mL m
response 43305

Manual Integration:
After
Baseline/Shoulder
09/16/10

(+) = Expected Retention Time
0915F017.D 091510-HTIN.M Thu Sep 16 13:13:57 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QCMS | **Units:** | ug/Kg |
| **Lab Code:** | KWG1009567-1 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F018.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.03 g | **Column2:** | RTX-35 |
| **% Solids:** | 66.1 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **26.7** | | 1.6 | 0.67 | |
| **36643-28-4** | Tri-n-butyltin Cation | **19.6** | | 1.6 | 0.65 | |
| **14488-53-0** | Di-n-butyltin Cation | **19.1** | | 1.6 | 0.29 | |
| **78763-54-9** | n-Butyltin Cation | **18.6** | | 1.6 | 0.40 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 67 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F018.D
**Lab ID:** KWG1009567-1 -- K1008775-002MS
**RunType:** MS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:01
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: _____

Secondary Review: _____

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F018.D\0915F018C.D
**Lab ID:** KWG1009567-1 -- K1008775-002MS
**RunType:** MS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:01
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]
Secondary Review: [illegible]

# *Quantitation Report*

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/16/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953737 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F018.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F018.D\0915F018c.d | | | **Vial:** | 25 |
| **Acqu Date:** | 09/15/2010 23:01 | **Quant Date:** | 09/16/2010 13:13 | **Dilution:** | 1.0 |
| **Run Type:** | MS | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009567-1 -- K1008775-002MS | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.07 +0.01 | 5.59 +0.01 | 1688973 | 1933805 | 83.29 | 92.50 | | | 74OK |
| | | | | %Recovery = | 67OK | 74OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Dry Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.33 +0.01 | 5.79 +0.01 | 1427513m | 1719085 | 88.31 | 94.96 | 26.7 | 28.7 | **28.7** |
| Tri-n-butyltin Cation | 7.32 +0.01 | 6.73 +0.01 | 1542614 | 1649267 | 64.98 | 65.79 | 19.6 | 19.9 | **19.9** |
| Di-n-butyltin Cation | 8.31 | 7.68 | 1976141m | 1966779m | 66.49 | 63.38 | 20.1 | 19.1 | **20.1** |
| n-Butyltin Cation | 9.28 +0.01 | 8.62 | 2216829 | 2422233 | 61.61 | 65.78 | 18.6 | 19.9 | **19.9** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.03 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | 66.1 % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:41 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

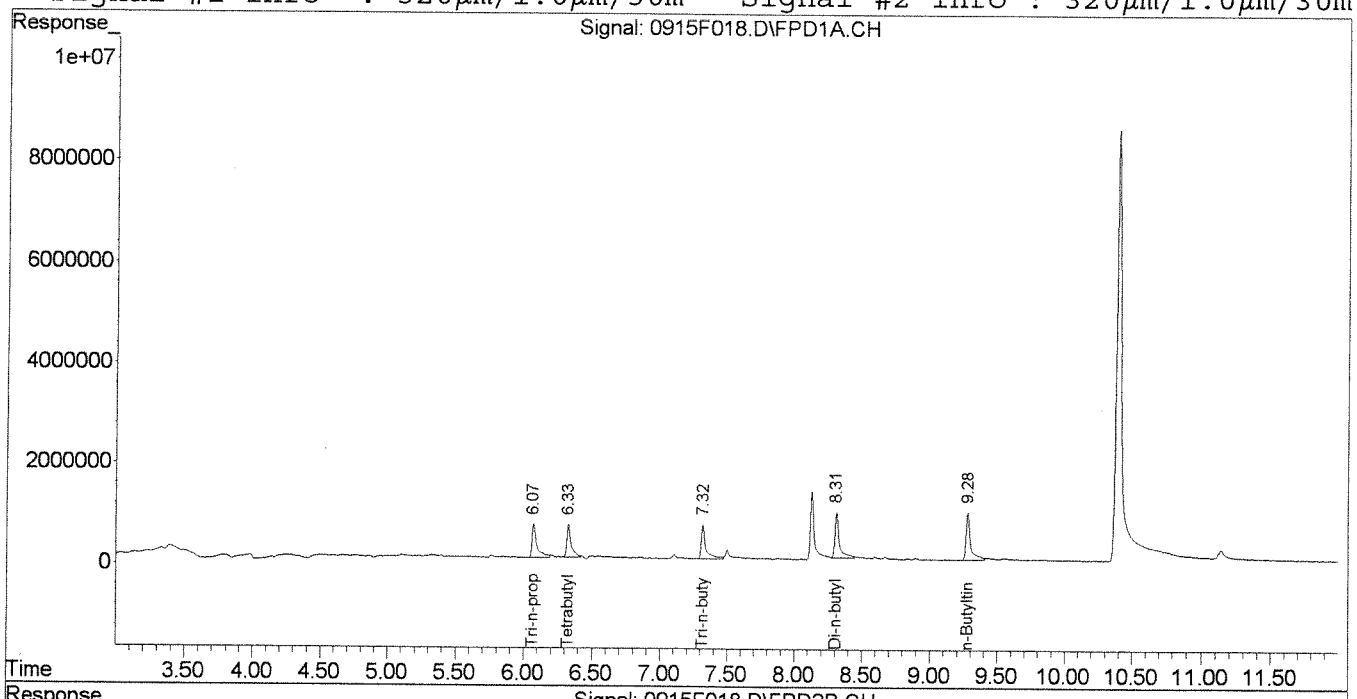
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.07 | 5.59 | 1688973 | 1933805 | 83.285 | 92.497 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.33 | 5.79 | 1427513 | 1719085 | 88.306m | 94.961 |
| 3) | Tri-n-butyltin | 7.32 | 6.73 | 1542614 | 1649267 | 64.983 | 65.792 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 1976141 | 1966779 | 66.486m | 63.380m |
| 5) | n-Butyltin | 9.28 | 8.62 | 2216829 | 2422233 | 61.614 | 65.775 |

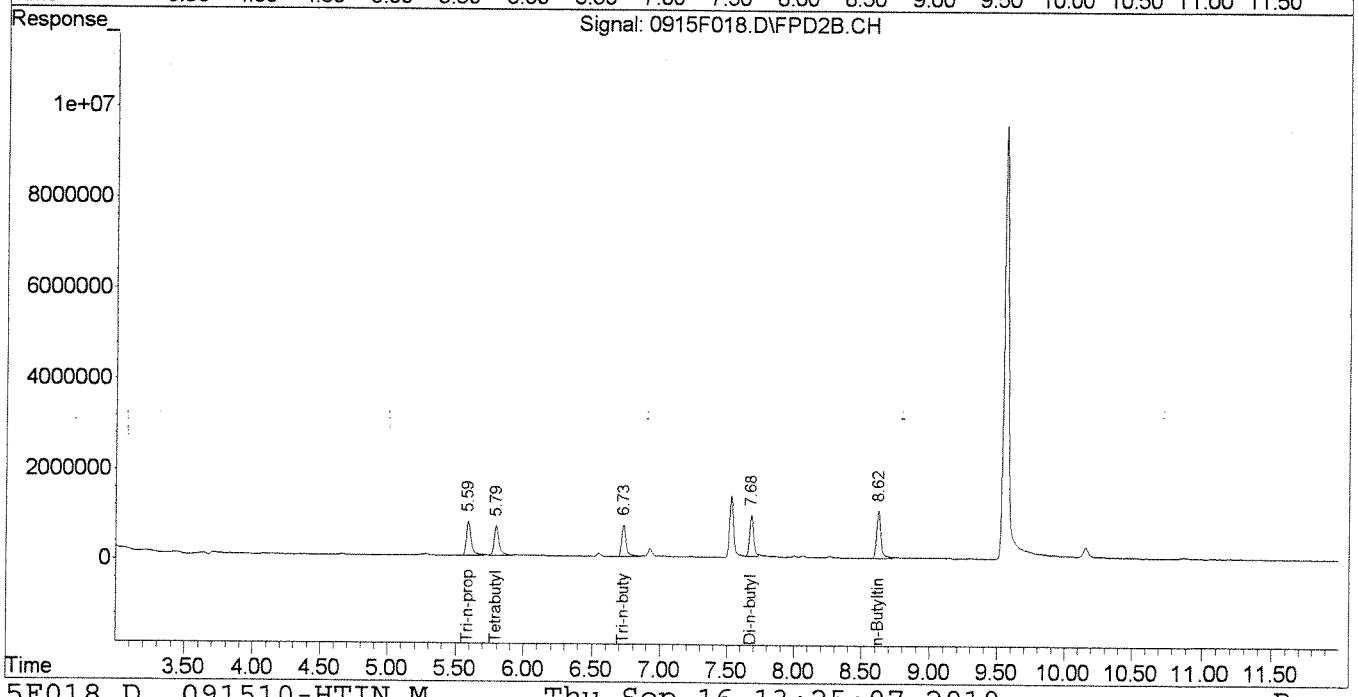
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:13 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

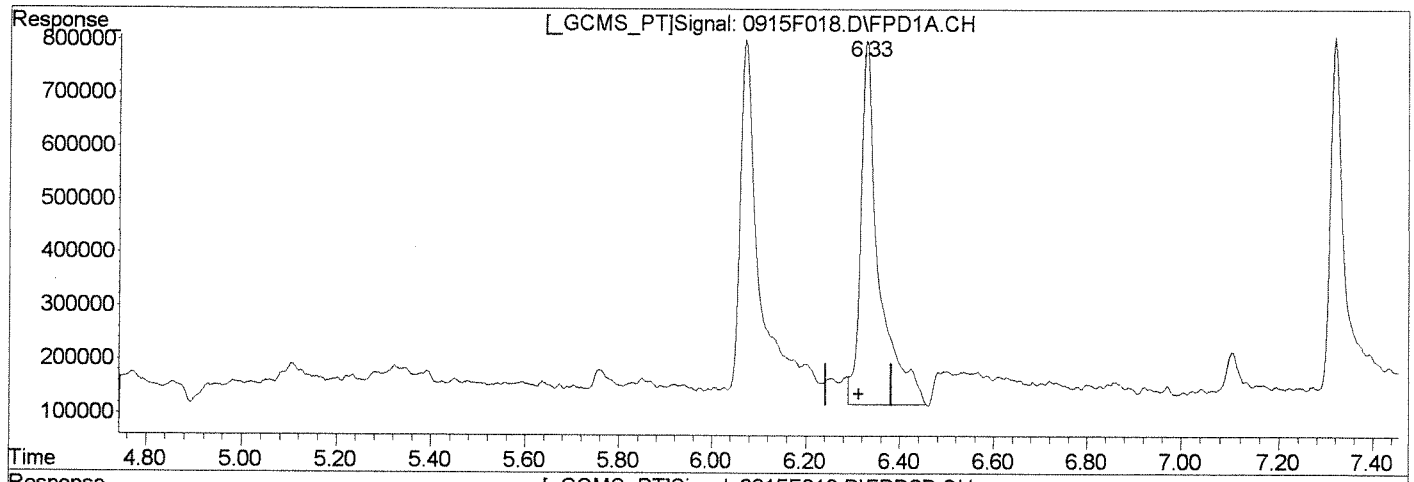


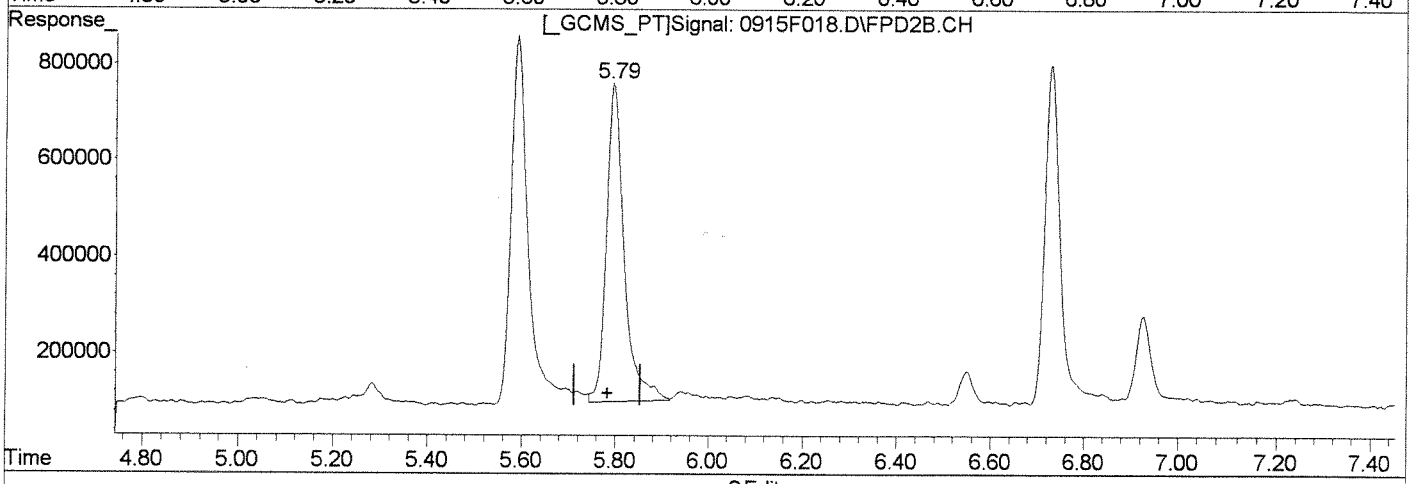



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin

6.33min 111.754ng/mL

response 1806566

(2) Tetrabutyltin #2

5.79min 94.961ng/mL

response 1719085

Manual Integration:

Before

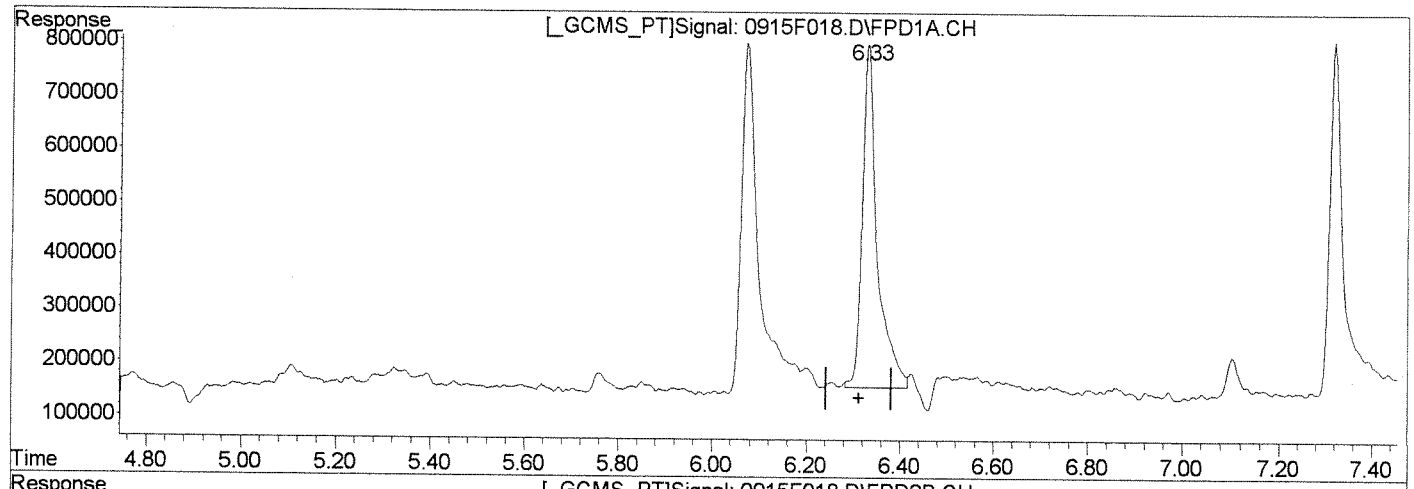
(+) = Expected Retention Time

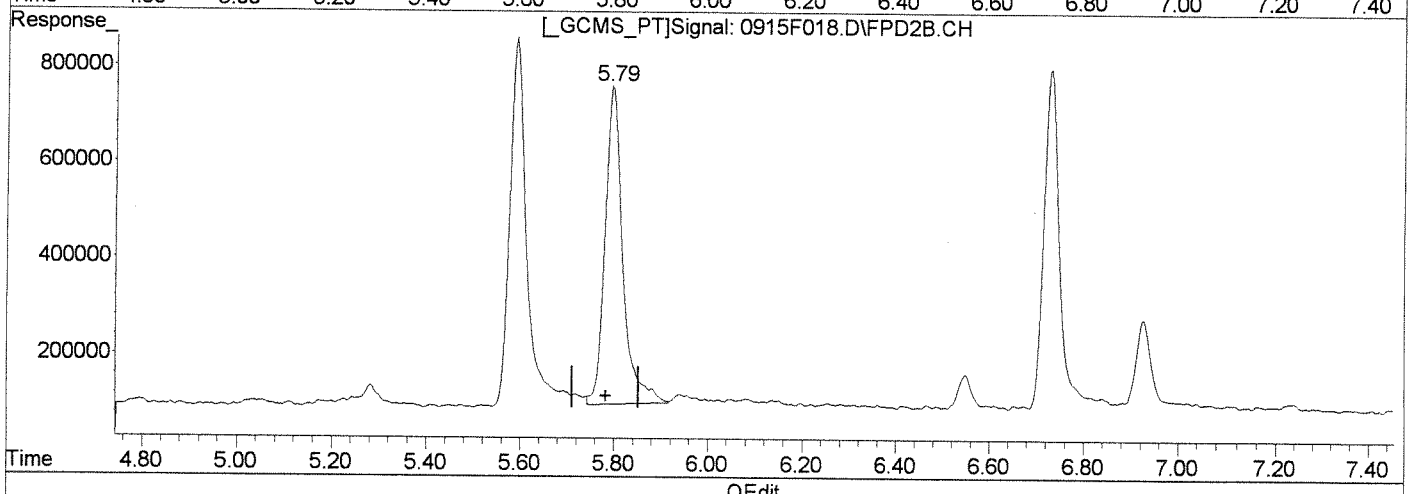
0915F018.D 091510-HTIN.M Thu Sep 16 13:14:13 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin

6.33min 88.306ng/mL m

response 1427513

(2) Tetrabutyltin #2

5.79min 94.961ng/mL

response 1719085

Manual Integration:

After

Baseline/Shoulder

09/16/10

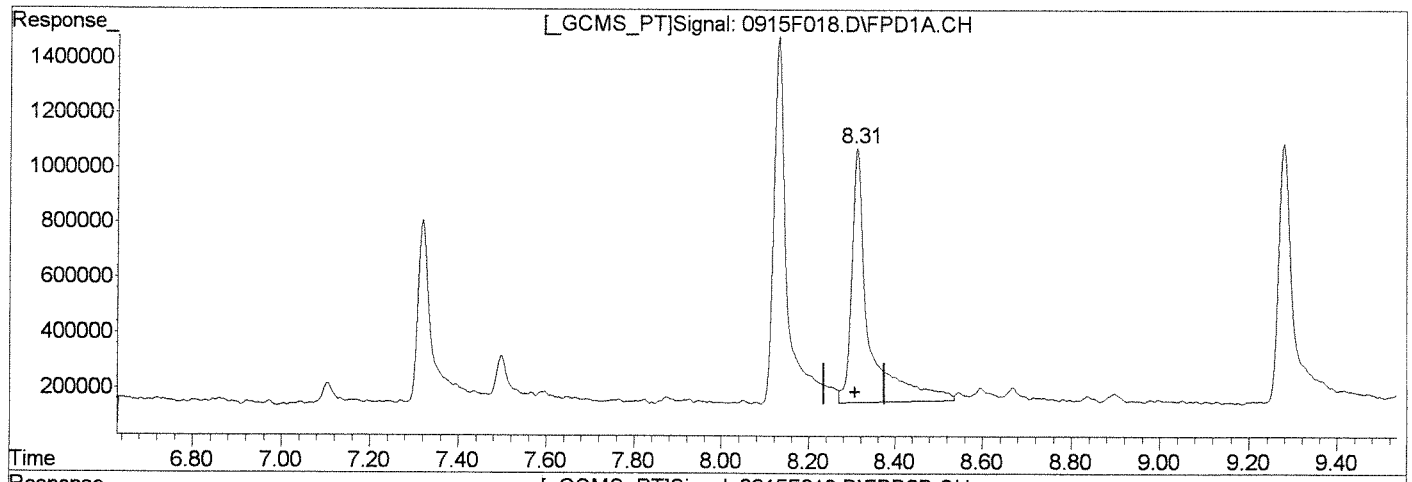
(+) = Expected Retention Time

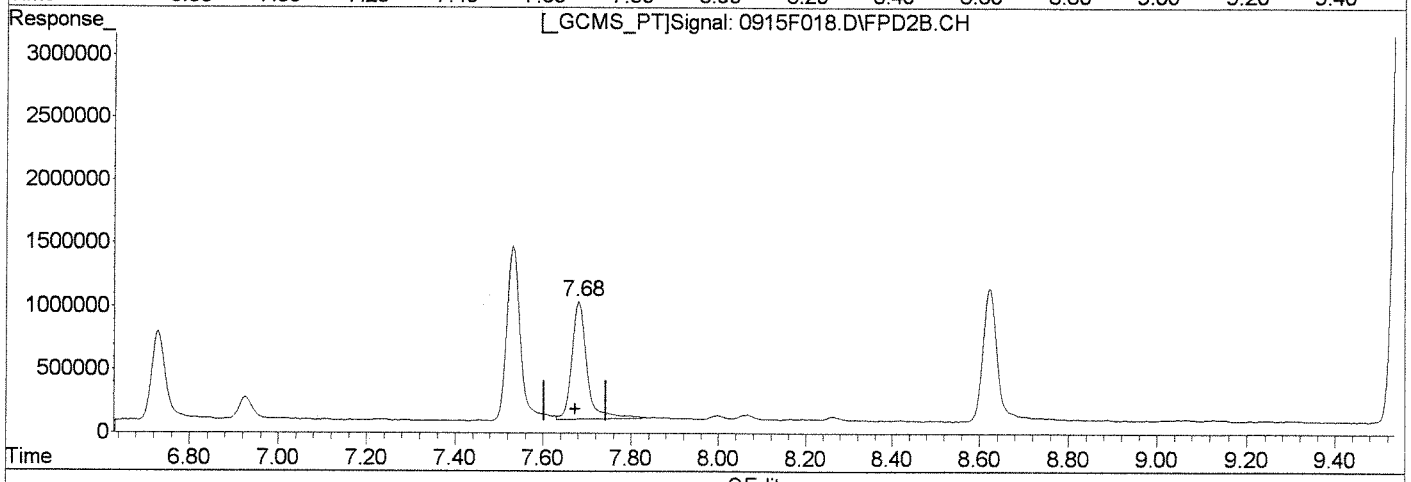
0915F018.D 091510-HTIN.M Thu Sep 16 13:14:21 2010

Quantitation Report (QEdit)

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(4) Di-n-butyltin

8.31min 84.347ng/mL

response 2507025

(4) Di-n-butyltin #2

7.68min 71.978ng/mL

response 2233572

Manual Integration:

Before

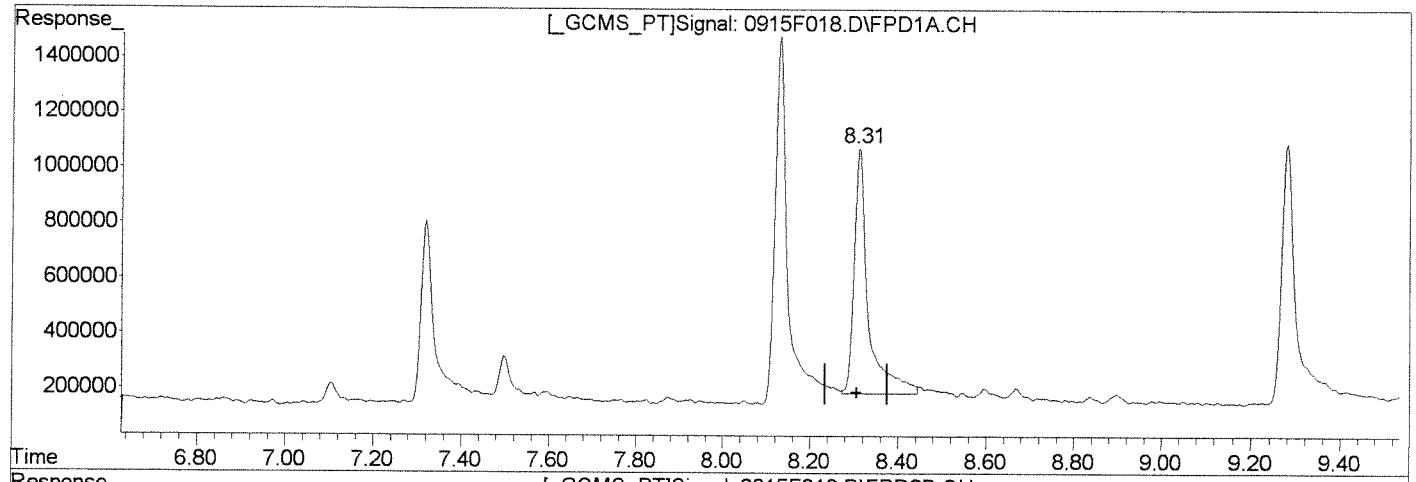
(+) = Expected Retention Time

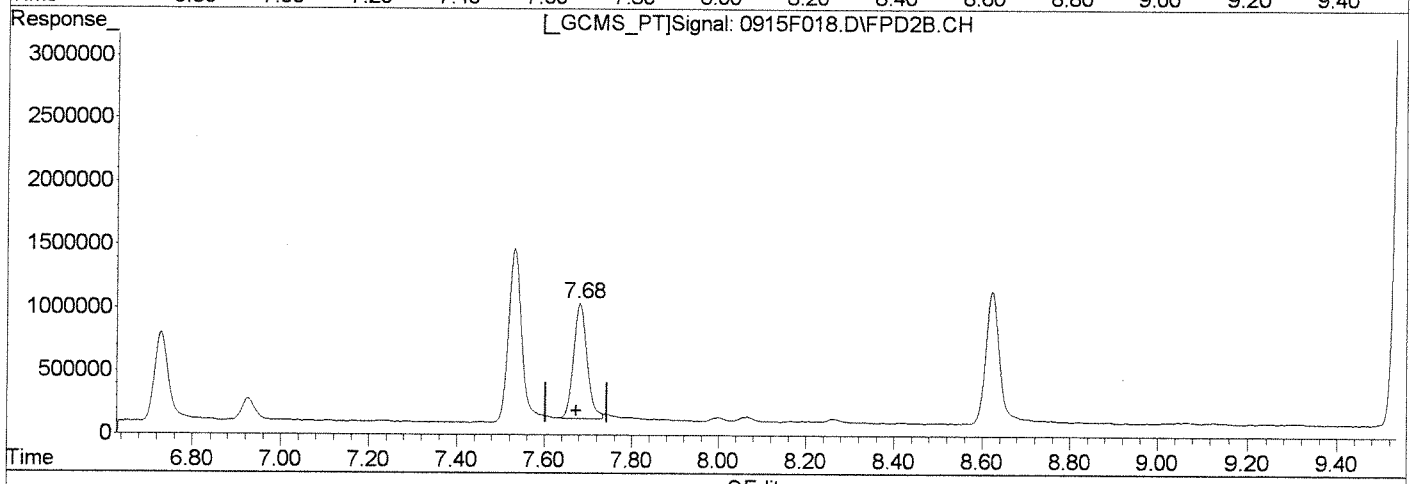
0915F018.D 091510-HTIN.M Thu Sep 16 13:14:26 2010

Quantitation Report (QedIt)

Signal #1 : J:\GC26\DATA\091510C\0915F018.D\FPD1A.CH Vial: 25
Signal #2 : J:\GC26\DATA\091510C\0915F018.D\FPD2B.CH
Acq On : 15 Sep 2010 11:01 pm Operator: CCotnam
Sample : KWG1009567-1 | K1008775-002MS | Butyltin Inst : GC26
Misc : SEMIVOA GC\W1009567\1-MS.H | F=4 D=1 A=2 Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(4) Di-n-butyltin

8.31min 66.486ng/mL m

response 1976141

(4) Di-n-butyltin #2

7.68min 63.380ng/mL m

response 1966779

Manual Integration:

After

Baseline/Shoulder

09/16/10

(+) = Expected Retention Time

0915F018.D 091510-HTIN.M Thu Sep 16 13:14:40 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QCDMS | **Units:** | ug/Kg |
| **Lab Code:** | KWG1009567-2 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F019.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.20 g | **Column2:** | RTX-35 |
| **% Solids:** | 66.1 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **21.6** | | 1.5 | 0.66 | |
| **36643-28-4** | Tri-n-butyltin Cation | **22.1** | | 1.5 | 0.65 | |
| **14488-53-0** | Di-n-butyltin Cation | **23.3** | | 1.5 | 0.29 | |
| **78763-54-9** | n-Butyltin Cation | **20.9** | | 1.5 | 0.39 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 66 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F019.D
**Lab ID:** KWG1009567-2 -- K1008775-002DMS
**RunType:** DMS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:17
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/16/10

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F019.D\0915F019C.D
**Lab ID:** KWG1009567-2 -- K1008775-002DMS
**RunType:** DMS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 23:17
**Date Quantitated:** 09/16/2010 13:13
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

Printed: 09/16/2010 13:57:53
u:\Stealth\Crystal.rpt\except2.rpt

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/16/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953738 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F019.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F019.D\0915F019c.d | | | **Vial:** | 26 |
| **Acqu Date:** | 09/15/2010 23:17 | **Quant Date:** | 09/16/2010 13:13 | **Dilution:** | 1.0 |
| **Run Type:** | DMS | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009567-2 -- K1008775-002DMS | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.06 | 5.58 | 1662752 | 1926678 | 81.99 | 92.16 | | | 74OK |
| | | | | %Recovery = | 66OK | 74OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Dry Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.32 | 5.79 +0.01 | 1165155m | 1466657 | 72.08 | 81.02 | 21.6 | 24.3 | **24.3** |
| Tri-n-butyltin Cation | 7.32 +0.01 | 6.73 +0.01 | 1751503 | 1911301 | 73.78 | 76.25 | 22.1 | 22.8 | **22.8** |
| Di-n-butyltin Cation | 8.31 | 7.68 | 2311276 | 2446455 | 77.76 | 78.84 | 23.3 | 23.6 | **23.6** |
| n-Butyltin Cation | 9.28 +0.01 | 8.62 | 2506700 | 2664938 | 69.67 | 72.37 | 20.9 | 21.7 | **21.7** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.20 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | 66.1 % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Signal #1 : J:\GC26\DATA\091510C\0915F019.D\FPD1A.CH Vial: 26
Signal #2 : J:\GC26\DATA\091510C\0915F019.D\FPD2B.CH
Acq On : 15 Sep 2010 11:17 pm Operator: CCotnam
Sample : KWG1009567-2 | K1008775-002DMS | Butylti Inst : GC26
Misc : SEMIVOA GC\W1009567\2-DMS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:41 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

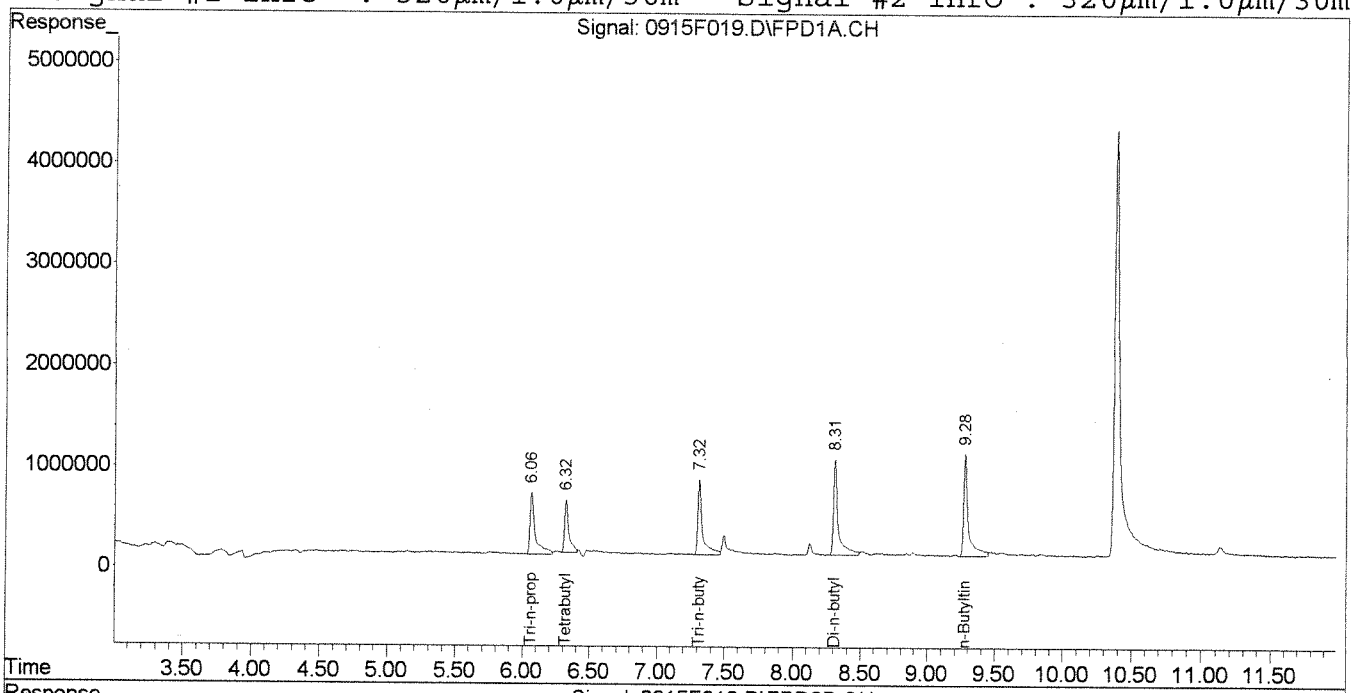
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 1662752 | 1926678 | 81.992 | 92.156 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.79 | 1165155 | 1466657 | 72.076m | 81.017 |
| 3) | Tri-n-butyltin | 7.32 | 6.73 | 1751503 | 1911301 | 73.783 | 76.245 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 2311276 | 2446455 | 77.762 | 78.838 |
| 5) | n-Butyltin | 9.28 | 8.62 | 2506700 | 2664938 | 69.671 | 72.366 |

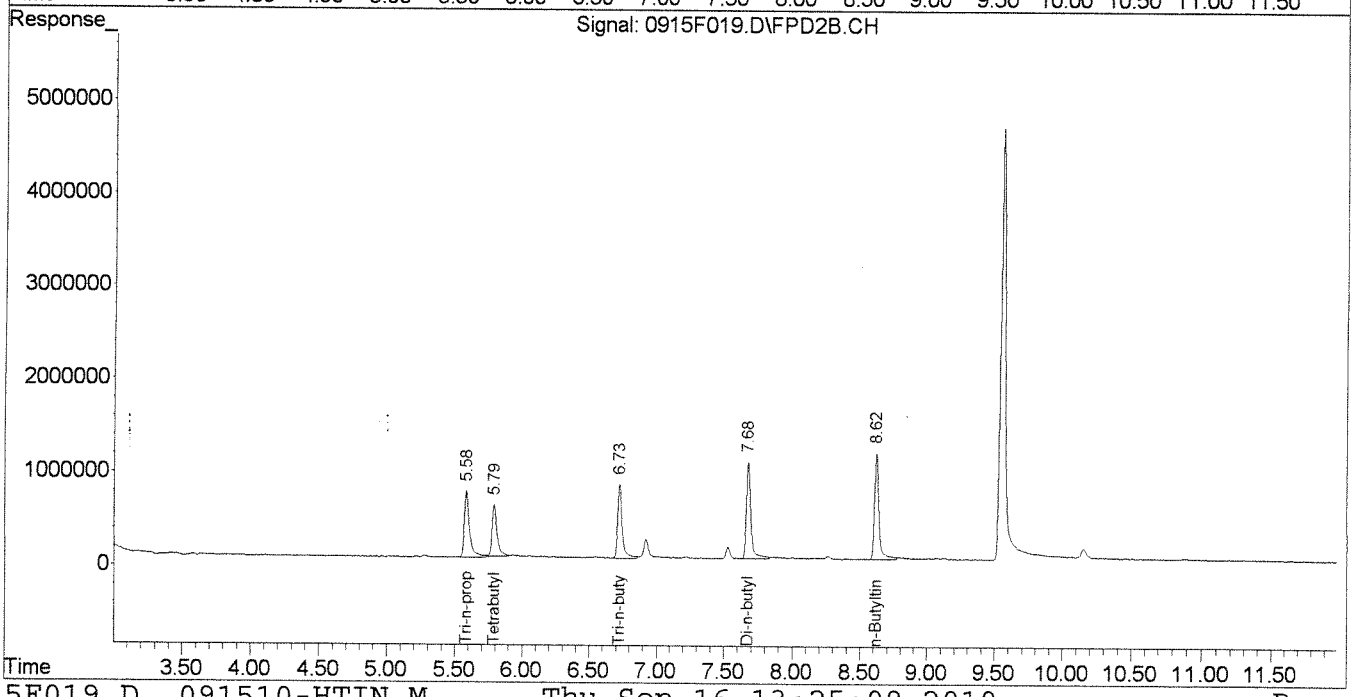
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F019.D\FPD1A.CH Vial: 26
Signal #2 : J:\GC26\DATA\091510C\0915F019.D\FPD2B.CH
Acq On : 15 Sep 2010 11:17 pm Operator: CCotnam
Sample : KWG1009567-2 | K1008775-002DMS | Butylti Inst : GC26
Misc : SEMIVOA GC\W1009567\2-DMS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:13 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

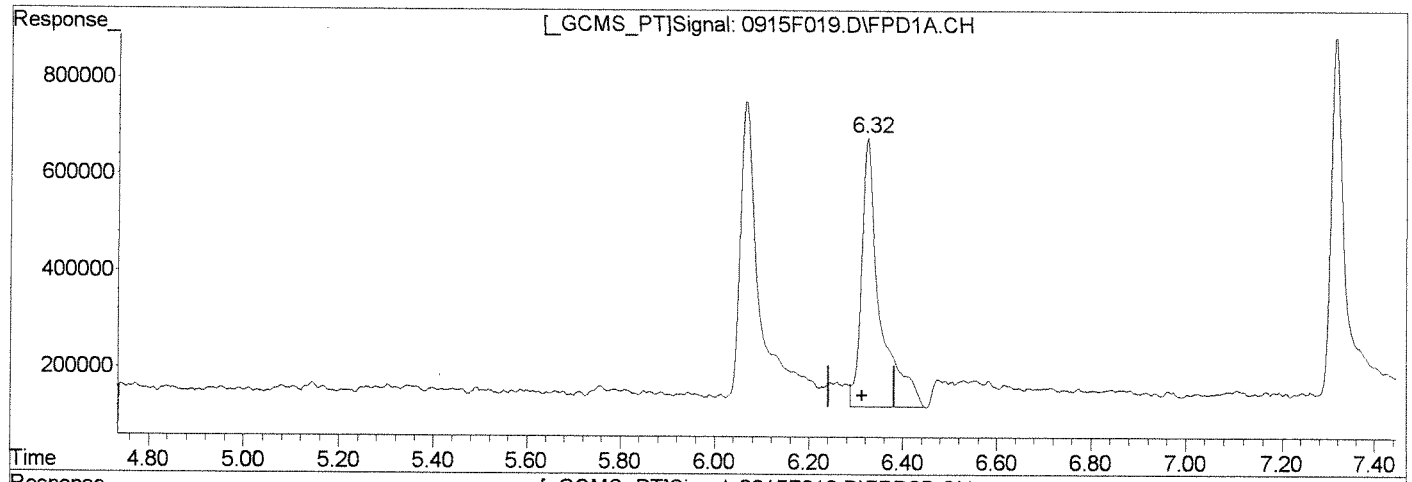


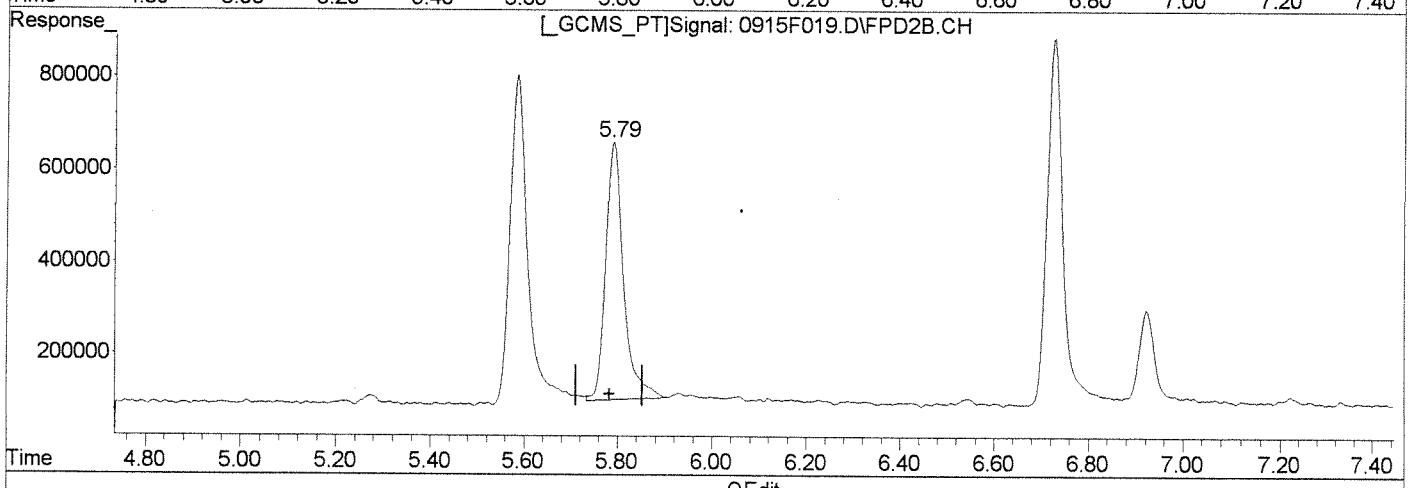



Quantitation Report (QEdit)

Signal #1 : J:\GC26\DATA\091510C\0915F019.D\FPD1A.CH Vial: 26
Signal #2 : J:\GC26\DATA\091510C\0915F019.D\FPD2B.CH
Acq On : 15 Sep 2010 11:17 pm Operator: CCotnam
Sample : KWG1009567-2 | K1008775-002DMS | Butylti Inst : GC26
Misc : SEMIVOA GC\W1009567\2-DMS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin

6.32min 94.164ng/mL

response 1522220

(2) Tetrabutyltin #2

5.79min 81.017ng/mL

response 1466657

Manual Integration:

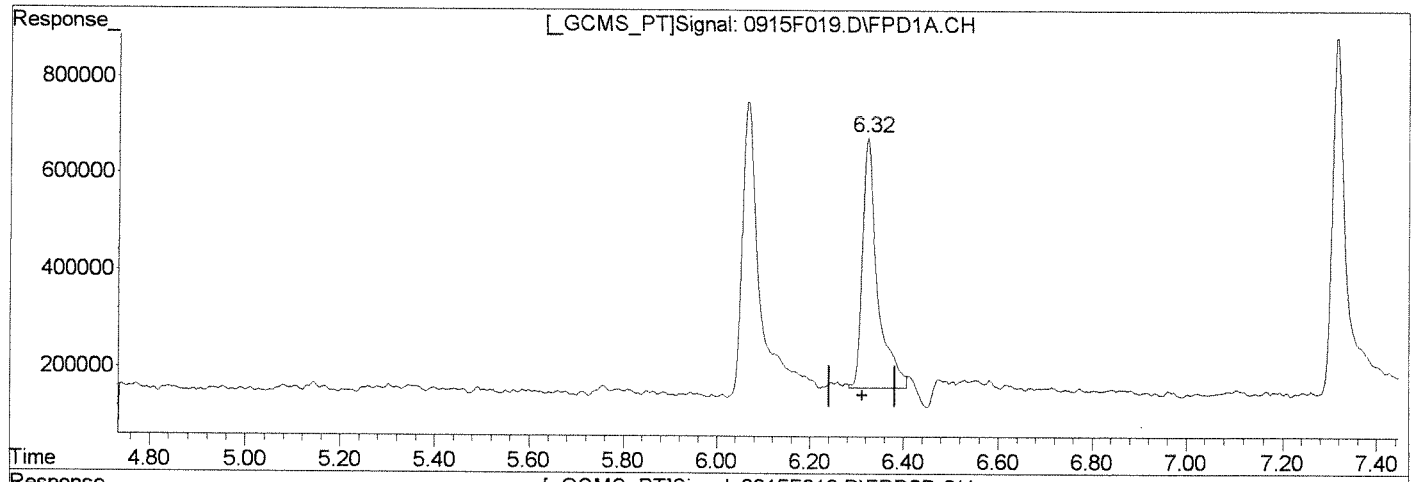
Before

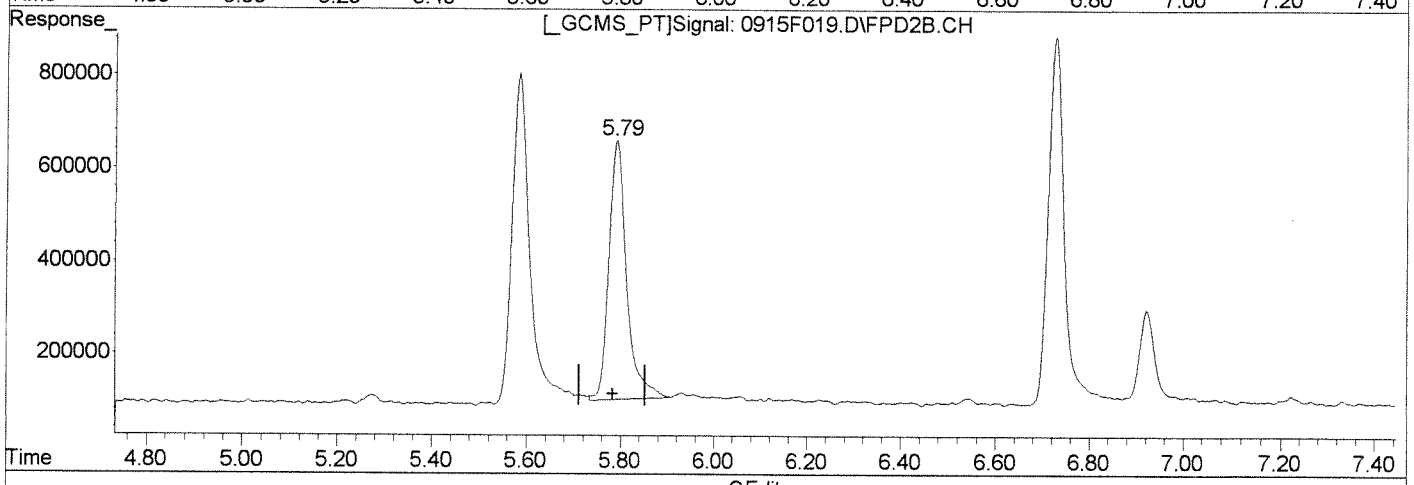
(+) = Expected Retention Time

0915F019.D 091510-HTIN.M Thu Sep 16 13:14:51 2010

Signal #1 : J:\GC26\DATA\091510C\0915F019.D\FPD1A.CH Vial: 26
Signal #2 : J:\GC26\DATA\091510C\0915F019.D\FPD2B.CH
Acq On : 15 Sep 2010 11:17 pm Operator: CCotnam
Sample : KWG1009567-2 | K1008775-002DMS | Butylti Inst : GC26
Misc : SEMIVOA GC\W1009567\2-DMS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(2) Tetrabutyltin
6.32min 72.076ng/mL m
response 1165155

(2) Tetrabutyltin #2
5.79min 81.017ng/mL
response 1466657

Manual Integration:
After
Baseline/Shoulder
09/16/10

(+) = Expected Retention Time
0915F019.D 091510-HTIN.M Thu Sep 16 13:14:56 2010

# COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 08/24/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Units:** | ug/Kg |
| **Lab Code:** | KWG1009567-3 | **Basis:** | Dry |
| **File ID:** | J:\GC26\DATA\091510C\0915F015.D | **Level:** | Low |
| **Instrument ID:** | GC26 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG1009567 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| | | **Column1:** | RTX-1 |
| **Sample Amount:** | 20.00 g | **Column2:** | RTX-35 |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| **1461-25-2** | Tetra-n-butyltin | **16.4** | | 1.0 | 0.44 | |
| **36643-28-4** | Tri-n-butyltin Cation | **14.1** | | 1.0 | 0.43 | |
| **14488-53-0** | Di-n-butyltin Cation | **8.65** | | 1.0 | 0.19 | |
| **78763-54-9** | n-Butyltin Cation | **16.4** | | 1.0 | 0.26 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 63 | 18-95 | 09/15/10 | Acceptable |

**Comments:**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F015.D
**Lab ID:** KWG1009567-3
**RunType:** LCS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 22:10
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/16/10

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F015.D\0915F015C.D
**Lab ID:** KWG1009567-3
**RunType:** LCS
**Matrix:** SEDIMENT

**Date Acquired:** 09/15/2010 22:10
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/16/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/16/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953739 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F015.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F015.D\0915F015c.d | | | **Vial:** | 22 |
| **Acqu Date:** | 09/15/2010 22:10 | **Quant Date:** | 09/16/2010 08:52 | **Dilution:** | 1.0 |
| **Run Type:** | LCS | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009567-3 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.06 | 5.58 | 1589450 | 1767255 | 78.38 | 84.53 | | | 68OK |
| | | | | %Recovery = | 63OK | 68OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Wet Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.32 | 5.78 | 1326393 | 1529910 | 82.05 | 84.51 | 16.4 | 16.9 | **16.9** |
| Tri-n-butyltin Cation | 7.31 | 6.72 | 1703902 | 1761415 | 71.78 | 70.27 | 14.4 | 14.1 | **14.4** |
| Di-n-butyltin Cation | 8.31 | 7.68 | 1307267 | 1342705 | 43.98 | 43.27 | 8.80 | 8.65 | **8.80** |
| n-Butyltin Cation | 9.27 | 8.62 | 3042198 | 3022113 | 84.56 | 82.07 | 16.9 | 16.4 | **16.9** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 20.00 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F015.D\FPD1A.CH Vial: 22
Signal #2 : J:\GC26\DATA\091510C\0915F015.D\FPD2B.CH
Acq On : 15 Sep 2010 10:10 pm Operator: CCotnam
Sample : KWG1009567-3 | LCS | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009567\3-LCS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:39 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | S | Tri-n-propyltin | 6.06 | 5.58 | 1589450 | 1767255 | 78.377 | 84.531 |
| | | Target Compounds | | | | | | |
| 2) | | Tetrabutyltin | 6.32 | 5.78 | 1326393 | 1529910 | 82.050 | 84.511 |
| 3) | | Tri-n-butyltin | 7.31 | 6.72 | 1703902 | 1761415 | 71.777 | 70.266 |
| 4) | | Di-n-butyltin | 8.31 | 7.68 | 1307267 | 1342705 | 43.982 | 43.269 |
| 5) | | n-Butyltin | 9.27 | 8.62 | 3042198 | 3022113 | 84.555 | 82.065 |

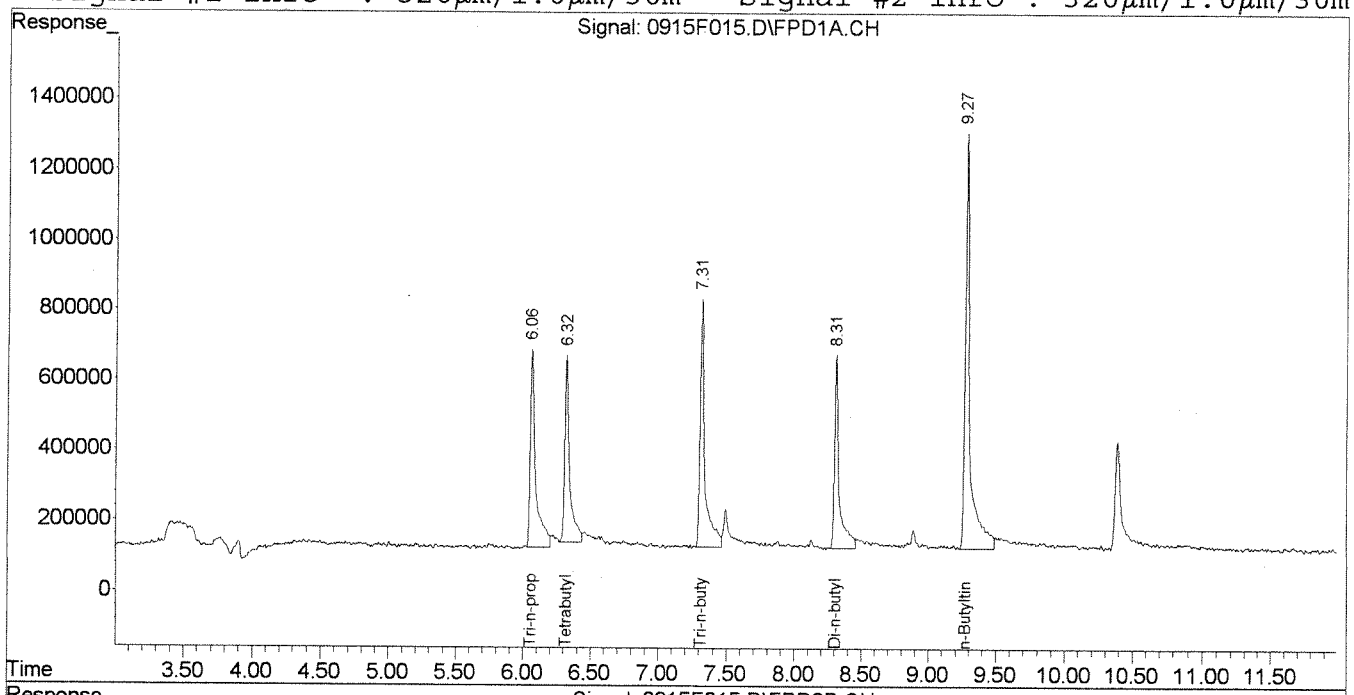
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

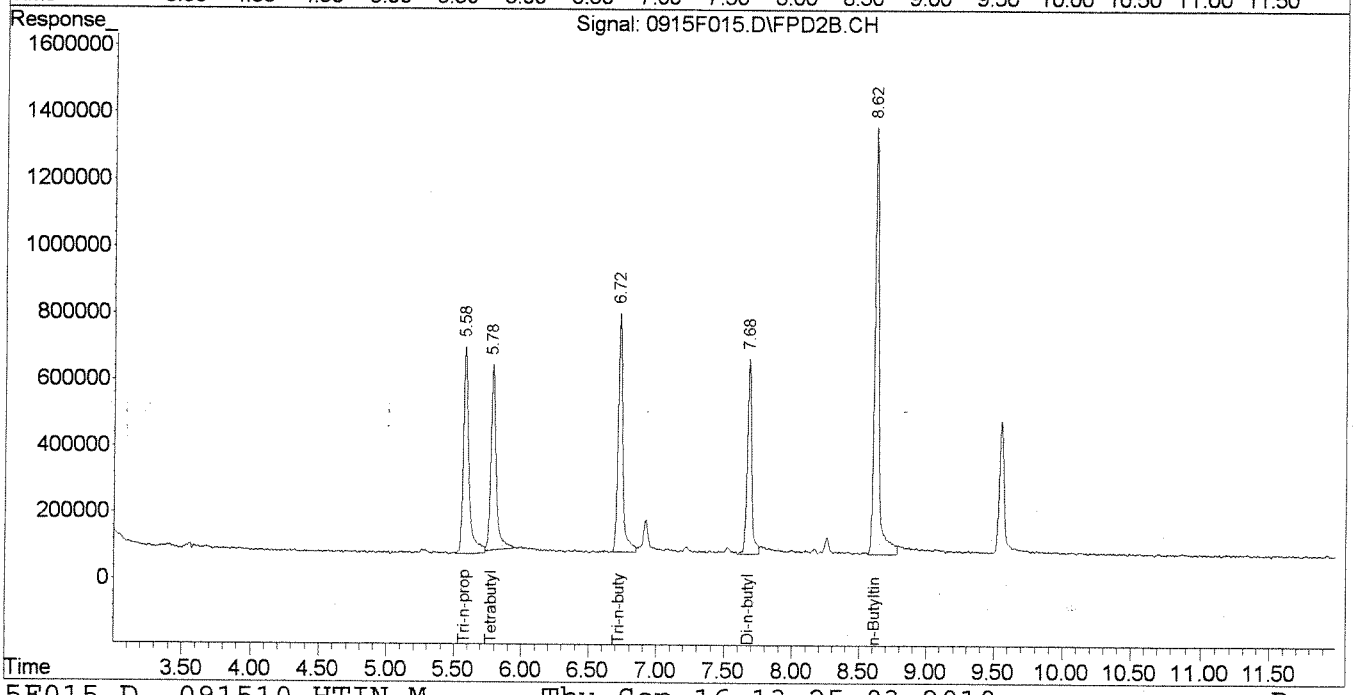
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F015.D\FPD1A.CH Vial: 22
Signal #2 : J:\GC26\DATA\091510C\0915F015.D\FPD2B.CH
Acq On : 15 Sep 2010 10:10 pm Operator: CCotnam
Sample : KWG1009567-3 | LCS | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009567\3-LCS.H | F=4 D=1 A= Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Windward | **Service Request:** | K1008857 |
| **Project:** | Passaic Sediments | **Date Collected:** | NA |
| **Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 8/24/2010 |
| | | **Date Analyzed:** | 9/16/2010 |

Standard Reference Material
Butyltins

Sample Name: NRC PACS-2
Lab Code: KWG1009567-5
Test Notes:

Units: ug/Kg (ppb)

| Analyte | Prep Method | Analysis Method | Certified Value | Result | CAS Advisory Limits | Result Notes |
|---|---|---|---|---|---|---|
| Tri-n-butyltin Cation | Method | Krone | 2170 ± 260 | 944 | 650-2430 | |
| Di-n-butyltin Cation | Method | Krone | 2050 ± 130 | 574 | 615-2180 | |

| Analyte | Prep Method | Analysis Method | Information Value | Result | CAS Advisory Limits | Result Notes |
|---|---|---|---|---|---|---|
| n-Butyltin Cation | Method | Krone | 890 | 710 | 270-1150 | |

Approved By: _____ Date: 9/17/10

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F032.D
**Lab ID:** KWG1009567-5
**RunType:** SRM
**Matrix:** SEDIMENT

**Date Acquired:** 09/16/2010 02:51
**Date Quantitated:** 09/16/2010 13:16
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F032.D\0915F032C.D
**Lab ID:** KWG1009567-5
**RunType:** SRM
**Matrix:** SEDIMENT

**Date Acquired:** 09/16/2010 02:51
**Date Quantitated:** 09/16/2010 13:16
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| Analytical Holding Time | NA | NA | NA | x | |
| Preparation Holding Time | NA | NA | NA | x | |
| Pre-Preparation Holding Time | NA | NA | NA | x | |
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Calibration Verification Pass/Fail | NA | NA | NA | x | |
| Continuing Calibration Recovery | NA | NA | NA | x | |
| Continuing Calibration Recovery (Closing) | NA | NA | NA | x | |
| Surrogates | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Retention Time | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Std MRL Unsupported by ICAL | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |
| Overdiluted Analysis | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | SEDIMENT |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/16/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | KWG1009567 | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | METHOD | | |
| **Prep Ref:** | 953741 | **Prep Date:** | 08/24/2010 | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | J:\GC26\DATA\091510C\0915F014.D | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F032.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F032.D\0915F032c.d | | | **Vial:** | 35 |
| **Acqu Date:** | 09/16/2010 02:51 | **Quant Date:** | 09/16/2010 13:16 | **Dilution:** | 1.0 |
| **Run Type:** | SRM | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009567-5 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.07 +0.01 | 5.59 +0.01 | 1170545 | 1448706 | 57.72 | 69.29 | | | 55OK |
| | | | | %Recovery = | 46OK | 55OK | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:** ug/Kg Wet Weight

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | 8.8U | 8.8U | 8.8U |
| Tri-n-butyltin Cation | 7.32 +0.01 | 6.73 +0.01 | 5600814m | 7292132 | 235.94 | 290.90 | 944 | 1160 | **1160** |
| Di-n-butyltin Cation | 8.31 | 7.68 | 4262006 | 5465993 | 143.39 | 176.14 | 574 | 705 | **705** |
| n-Butyltin Cation | 9.28 +0.01 | 8.62 | 6390465 | 8325031 | 177.62 | 226.07 | 710 | 904 | **904** |

The -/+ after Retention Time symbolize the direction of the RT shift

| | | | |
|---|---|---|---|
| **Prep Amount:** | 1.00 g | **Dilution:** | 1.0 |
| **Prep Final Vol:** | 4 mL | **Unit Factor:** | 1 |
| **Solids:** | % | | |

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F032.D\FPD1A.CH Vial: 35
Signal #2 : J:\GC26\DATA\091510C\0915F032.D\FPD2B.CH
Acq On : 16 Sep 2010 2:51 am Operator: CCotnam
Sample : KWG1009567-5 SRM Inst : GC26
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:46 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.07 | 5.59 | 1170545 | 1448706 | 57.721 | 69.294 |
| | Target Compounds | | | | | | |
| 3) | Tri-n-butyltin | 7.32 | 6.73 | 5600814 | 7292132 | 235.936m | 290.897 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 4262006 | 5465993 | 143.393 | 176.144 |
| 5) | n-Butyltin | 9.28 | 8.62 | 6390465 | 8325031 | 177.616 | 226.065 # |

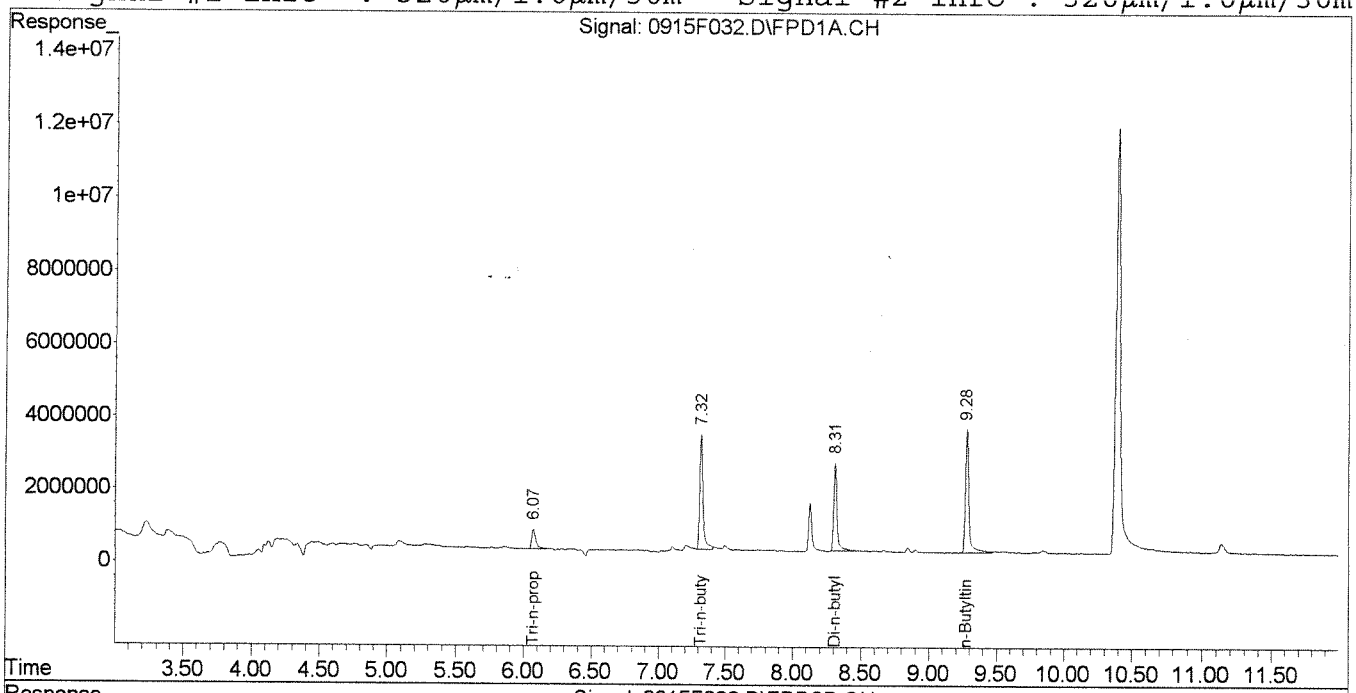
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

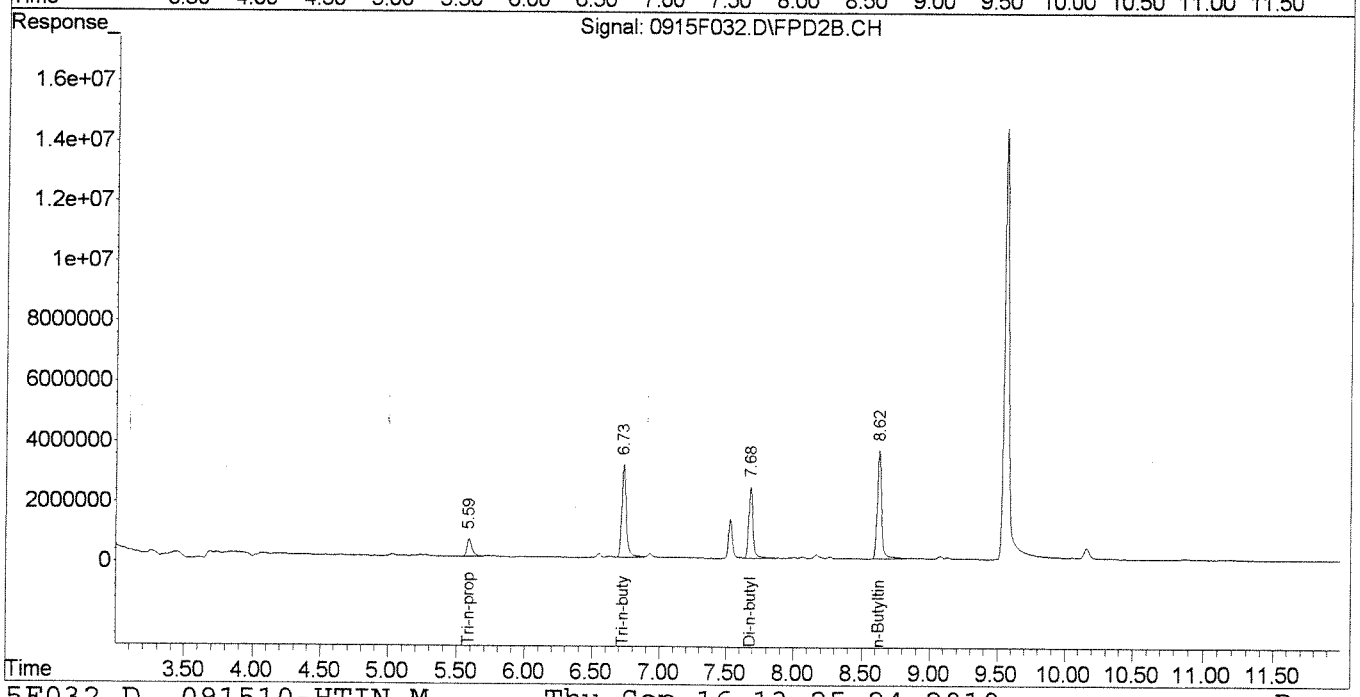
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F032.D\FPD1A.CH Vial: 35
Signal #2 : J:\GC26\DATA\091510C\0915F032.D\FPD2B.CH
Acq On : 16 Sep 2010 2:51 am Operator: CCotnam
Sample : KWG1009567-5 SRM Inst : GC26
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 13:16 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

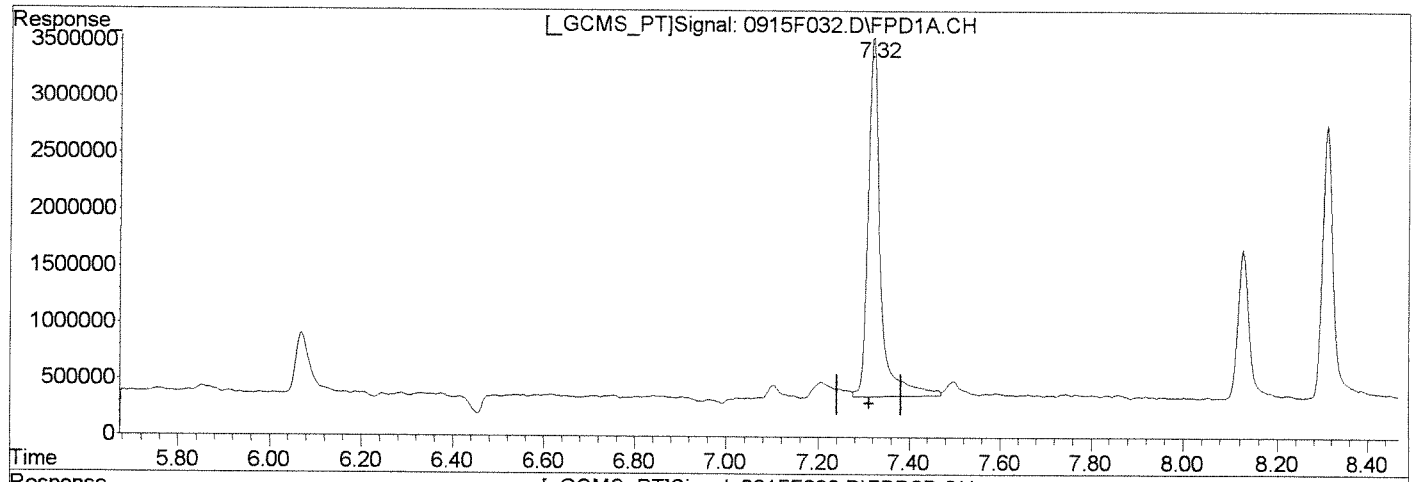


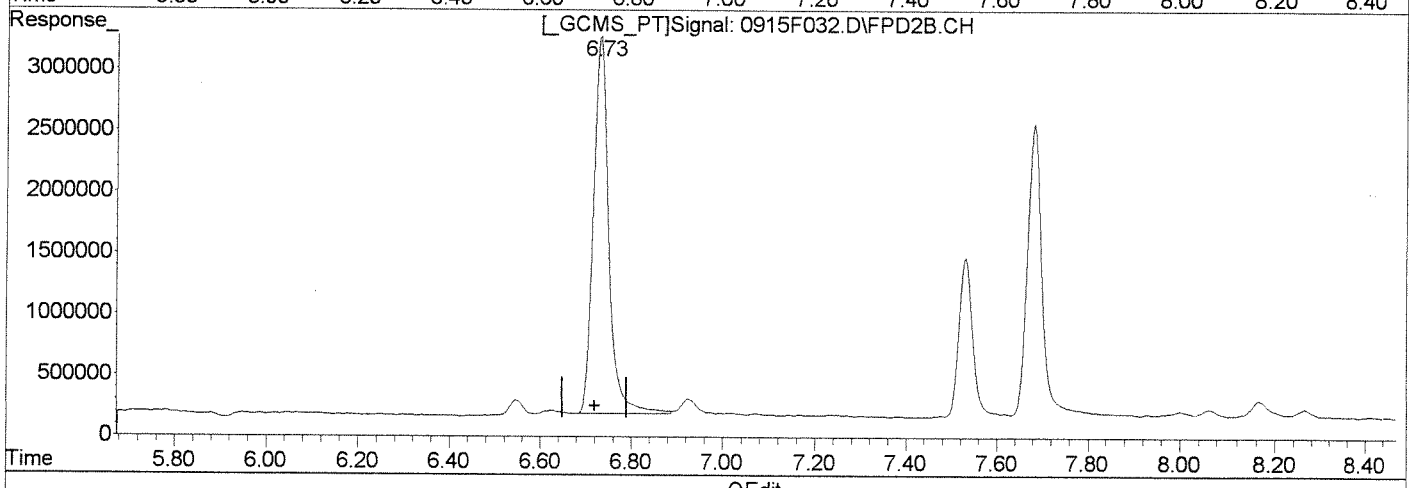



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F032.D\FPD1A.CH Vial: 35
Signal #2 : J:\GC26\DATA\091510C\0915F032.D\FPD2B.CH
Acq On : 16 Sep 2010 2:51 am Operator: CCotnam
Sample : KWG1009567-5 SRM Inst : GC26
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(3) Tri-n-butyltin

7.32min 256.322ng/mL

response 6084746

(3) Tri-n-butyltin #2

6.73min 290.897ng/mL

response 7292132

Manual Integration:

Before

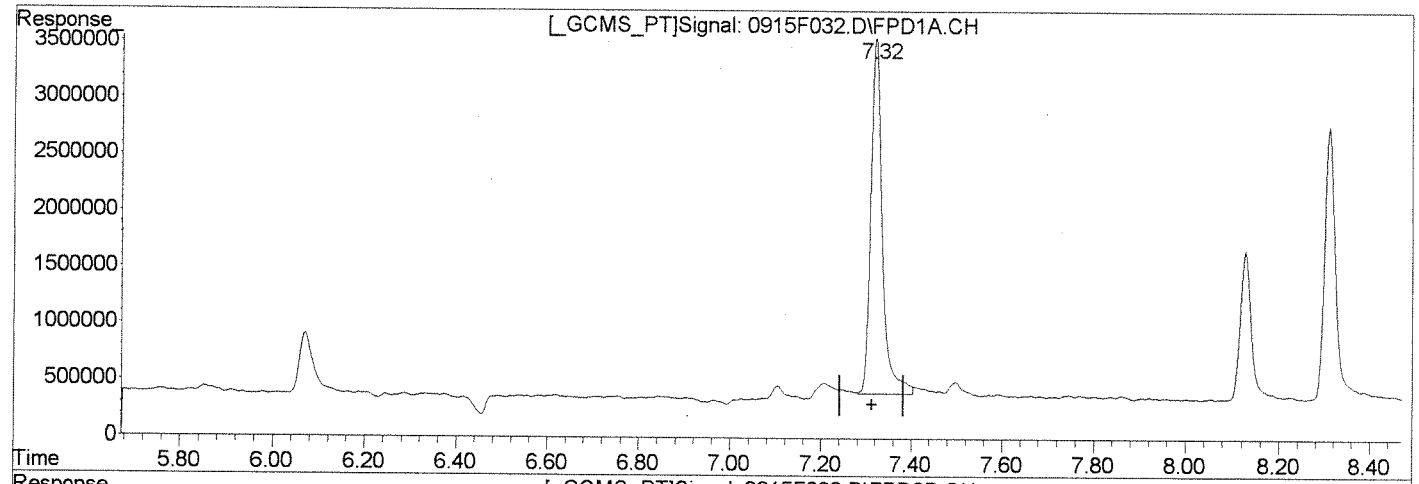
(+) = Expected Retention Time

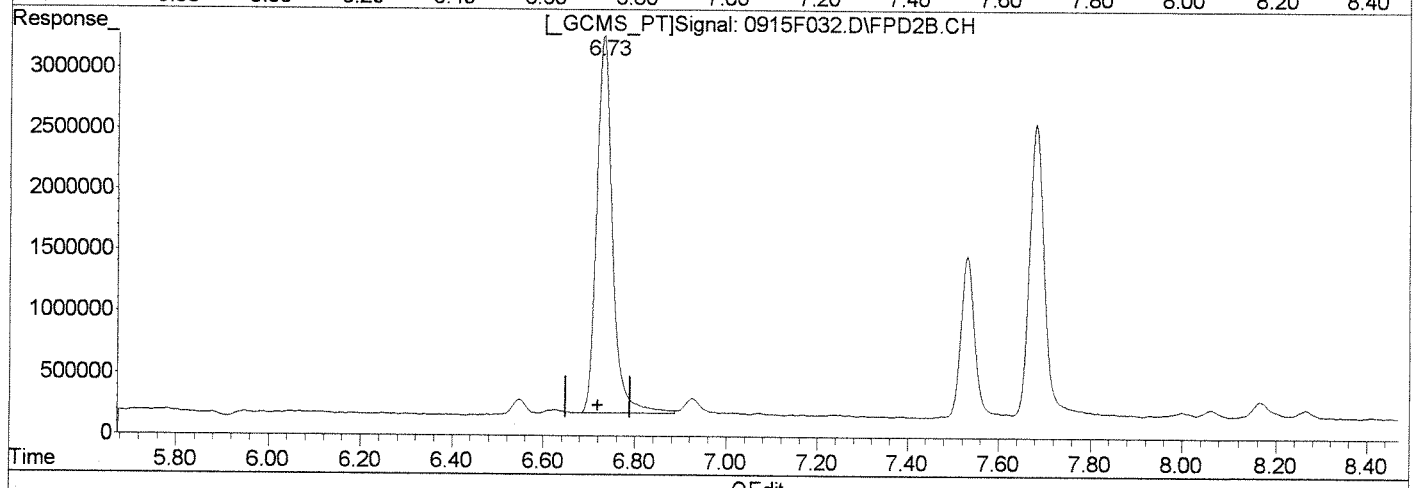
0915F032.D 091510-HTIN.M Thu Sep 16 13:17:42 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\091510C\0915F032.D\FPD1A.CH  Vial: 35
Signal #2 : J:\GC26\DATA\091510C\0915F032.D\FPD2B.CH
Acq On : 16 Sep 2010 2:51 am  Operator: CCotnam
Sample : KWG1009567-5 SRM  Inst : GC26
Misc :  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010  Quant Results File: 091510-HTIN.RES

Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration




QEdit

(3) Tri-n-butyltin

7.32min 235.936ng/mL m

response 5600814

(3) Tri-n-butyltin #2

6.73min 290.897ng/mL

response 7292132

Manual Integration:

After

Baseline/Shoulder

09/16/10

(+) = Expected Retention Time

0915F032.D 091510-HTIN.M  Thu Sep 16 13:17:49 2010

# Organic Analysis:
# Butyltins (as cation)

## Validation Package

### Standards Data

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

**Initial Calibration Summary**
**Butyltins (as cation)**

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-1

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\083010A\0830FA03.D | E | J:\GC26\DATA\083010A\0830FA08.D |
| B | J:\GC26\DATA\083010A\0830FA04.D | F | J:\GC26\DATA\083010A\0830FA09.D |
| C | J:\GC26\DATA\083010A\0830FA05.D | G | J:\GC26\DATA\083010A\0830FA11.D |
| D | J:\GC26\DATA\083010A\0830FA07.D | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 20500 | B | 5.0 | 16500 | C | 20 | 18100 | D | 200 | 22800 | E | 500 | 24900 |
| | F | 1000 | 25300 | G | 50 | 15900 | | | | | | | | | |
| Tri-n-butyltin Cation | | | | B | 4.5 | 26800 | C | 18 | 27600 | D | 180 | 30800 | E | 450 | 31300 |
| | F | 890 | 32000 | G | 45 | 27200 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 34300 | B | 3.8 | 34900 | C | 15 | 34900 | D | 150 | 43500 | E | 380 | 42800 |
| | F | 770 | 45300 | G | 38 | 35300 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 44300 | B | 3.1 | 39000 | C | 12 | 38900 | D | 120 | 47100 | E | 310 | 50200 |
| | F | 620 | 51200 | G | 31 | 39600 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 24600 | B | 5.0 | 19800 | C | 20 | 25000 | D | 200 | 26100 | E | 500 | 26900 |
| | F | 1000 | 27700 | G | 50 | 21900 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-1

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 18.8 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 8.0 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 12.6 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 12.0 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 11.5 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010
**Date Analyzed:** 08/30/2010

**Second Source Calibration Verification**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration ID:** CAL9814
**Units:** ng/mL

**File ID:** J:\GC26\DATA\083010A\0830FA12.D

**Column ID:** RTX-1

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 54 | 20600 | 22100 | 7 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 36 | 29300 | 23700 | -19 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 37 | 38700 | 37500 | -3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 44300 | 43800 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-35

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\083010A\0830FA03.D\0830FA03c.d | E | J:\GC26\DATA\083010A\0830FA08.D\0830FA08c.d |
| B | J:\GC26\DATA\083010A\0830FA04.D\0830FA04c.d | F | J:\GC26\DATA\083010A\0830FA09.D\0830FA09c.d |
| C | J:\GC26\DATA\083010A\0830FA05.D\0830FA05c.d | G | J:\GC26\DATA\083010A\0830FA11.D\0830FA11c.d |
| D | J:\GC26\DATA\083010A\0830FA07.D\0830FA07c.d | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 20300 | B | 5.0 | 17300 | C | 20 | 17500 | D | 200 | 19200 | E | 500 | 18600 |
| | F | 1000 | 19300 | G | 50 | 15500 | | | | | | | | | |
| Tri-n-butyltin Cation | A | 1.8 | 27200 | B | 4.5 | 25000 | C | 18 | 27100 | D | 180 | 27500 | E | 450 | 26200 |
| | F | 890 | 26300 | G | 45 | 24600 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 32900 | B | 3.8 | 34300 | C | 15 | 33700 | D | 150 | 35700 | E | 380 | 34500 |
| | F | 770 | 34600 | G | 38 | 31700 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 40000 | B | 3.1 | 39000 | C | 12 | 36300 | D | 120 | 39300 | E | 310 | 39400 |
| | F | 620 | 40900 | G | 31 | 34600 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 21900 | B | 5.0 | 19400 | C | 20 | 22700 | D | 200 | 22500 | E | 500 | 21800 |
| | F | 1000 | 22000 | G | 50 | 19000 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 08/30/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9814
**Instrument ID:** GC26

**Column:** RTX-35

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 8.7 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 4.2 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 3.9 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 5.8 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 7.1 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Calibration Date:** | 08/30/2010 |
| | | **Date Analyzed:** | 08/30/2010 |

**Second Source Calibration Verification**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration ID:** | CAL9814 |
| **Analysis Method:** | Krone | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\083010A\0830FA12.D\0830FA12c.d | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 54 | 18200 | 19700 | 8 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 37 | 26300 | 21600 | -18 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 40 | 33900 | 35600 | 5 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 38500 | 38200 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

Sequence Name: C:\GC26\SEQUENCE\083010A.S
Comment:
Operator: CCotnam
Data Path: C:\GC26\DATA\083010A\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

CAL 9814

| Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|
| 1 | IB | 76 | 0830FA01 | TINS2 | HEX |
| 2 | IB | 77 | 0830FA02 | TINS2 | HEX |
| 3 | ICAL | 78 | 0830FA03 | TINS2 | HTINS@ 2PPB OT4-28I-NR for Tr. on front |
| 4 | ICAL | 79 | 0830FA04 | TINS2 | HTINS@ 5PPB OT4-28J |
| 5 | ICAL | 80 | 0830FA05 | TINS2 | HTINS@ 20PPB OT4-28K |
| 6 | ICAL | 81 | 0830FA06 | TINS2 | HTINS@ 50PPB OT4-28G-NR reinject |
| 7 | ICAL | 82 | 0830FA07 | TINS2 | HTINS@ 200PPB OT4-28L |
| 8 | ICAL | 83 | 0830FA08 | TINS2 | HTINS@ 500PPB OT4-28M |
| 9 | ICAL | 84 | 0830FA09 | TINS2 | HTINS@ 1000PPB OT4-28N |
| 10 | ICV | 85 | 0830FA10 | TINS2 | HTINS @ 50PPB OT4-28O-NR reinject |
| 11 | ICAL | 81 | 0830FA11 | TINS2 | HTINS@ 50PPB OT4-28G |
| 12 | ICV | 85 | 0830FA12 | TINS2 | HTINS @ 50PPB OT4-28O |
| 13 | | | | | |

Last Modified: Mon Aug 30 15:15:11 2010

Calibration Status Report GC26

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|---|---|---|---|---|
| 2 | 2 | 1.25 | 0.00 | J:\GC26\DATA\083010A\0830FA03.D |
| 3 | 3 | 3.12 | 0.00 | J:\GC26\DATA\083010A\0830FA04.D |
| 4 | 4 | 12.46 | 0.00 | J:\GC26\DATA\083010A\0830FA05.D |
| 5 | 5 | 31.15 | 0.00 | J:\GC26\DATA\083010A\0830FA11.D |
| 6 | 6 | 124.60 | 0.00 | J:\GC26\DATA\083010A\0830FA07.D |
| 7 | 7 | 311.50 | 0.00 | J:\GC26\DATA\083010A\0830FA08.D |

| # | ID | Update Time | Quant Time | Acquisition Time |
|---|---|---|---|---|
| 2 | 2 | Aug 30 15:35 2010 | Aug 30 15:33 2010 | 30 Aug 2010 10:48 am |
| 3 | 3 | Aug 30 15:35 2010 | Aug 30 15:33 2010 | 30 Aug 2010 11:05 am |
| 4 | 4 | Aug 30 15:35 2010 | Aug 30 15:10 2010 | 30 Aug 2010 11:21 am |
| 5 | 5 | Aug 30 15:35 2010 | Aug 30 15:32 2010 | 30 Aug 2010 3:17 pm |
| 6 | 6 | Aug 30 15:35 2010 | Aug 30 15:10 2010 | 30 Aug 2010 11:54 am |
| 7 | 7 | Aug 30 15:35 2010 | Aug 30 15:10 2010 | 30 Aug 2010 12:11 pm |

083010-HTIN.M Mon Aug 30 16:14:53 2010

# DATA ANALYSIS PARAMETERS

Method Name: J:\GC26\METHODS\083010-HTIN.M

## Percent Report Settings

Sort By: Signal

Output Destination
Screen: No
Printer: Yes
File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

## Quantitative Report Settings

Report Type: Summary

Output Destination
Screen: No
Printer: Yes
File: No

Generate Report During Run Method: No

Hexylated Butyltins CAL9536
Calibration Last Updated: Mon Aug 30 16:06:15 2010

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

## Compound Information

1) Tri-n-propyltin ( )

Ret. Time 6.14 min., Extract & Integrate from 6.07 to 6.21 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 49220 |
| 3 | | 5.000 | 98805 |
| 4 | | 20.000 | 499877 |
| 5 | | 50.000 | 1093465 |
| 6 | | 200.000 | 5222155 |
| 7 | | 500.000 | 13473281 |
| 8 | | 1000.000 | 27661219 |

Curve Fit: Avg. RF

---

2) Tetrabutyltin ( )

Ret. Time 6.40 min., Extract & Integrate from 6.33 to 6.47 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 40905 |
| 3 | | 5.000 | 82487 |
| 4 | | 20.000 | 362569 |
| 5 | | 50.000 | 796133 |
| 6 | | 200.000 | 4550273 |
| 7 | | 500.000 | 12439373 |
| 8 | | 1000.000 | 25297918 |

Curve Fit: Avg. RF

---

3) Tri-n-butyltin ( )

Ret. Time 7.41 min., Extract & Integrate from 7.34 to 7.48 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.782 | -1 |
| 3 | | 4.455 | 119227 |
| 4 | | 17.820 | 490949 |
| 5 | | 44.550 | 1212250 |
| 6 | | 178.200 | 5486656 |
| 7 | | 445.500 | 13943890 |
| 8 | | 891.000 | 28507675 |

Curve Fit: Avg. RF

---

4) Di-n-butyltin ( )

Ret. Time 8.41 min., Extract & Integrate from 8.34 to 8.48 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.533 | 52600 |
| 3 | | 3.833 | 133669 |
| 4 | | 15.330 | 535360 |
| 5 | | 38.325 | 1353979 |
| 6 | | 153.300 | 6675615 |
| 7 | | 383.250 | 16414208 |
| 8 | | 766.500 | 34704259 |

Curve Fit: Avg. RF

---

5) n-Butyltin ( )

Ret. Time 9.39 min., Extract & Integrate from 9.32 to 9.46 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.246 | 55242 |
| 3 | | 3.115 | 121331 |
| 4 | | 12.460 | 485019 |
| 5 | | 31.150 | 1232373 |
| 6 | | 124.600 | 5870536 |
| 7 | | 311.500 | 15638482 |
| 8 | | 623.000 | 31912194 |

Curve Fit: Avg. RF

---

6) Signal #2 ( )

Ret. Time 7.12 min., Extract & Integrate from 7.05 to 7.19 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | not used for this compound | |
| 3 | | not used for this compound | |
| 4 | | not used for this compound | |
| 5 | | not used for this compound | |
| 6 | | not used for this compound | |
| 7 | | not used for this compound | |
| 8 | | 1000.000 | -1 |

Curve Fit: Avg. RF

---

7) Tri-n-propyltin #2 ( )

Ret. Time 5.56 min., Extract & Integrate from 5.49 to 5.63 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 43828 |
| 3 | | 5.000 | 96896 |
| 4 | | 20.000 | 454954 |
| 5 | | 50.000 | 948291 |
| 6 | | 200.000 | 4495682 |
| 7 | | 500.000 | 10881210 |
| 8 | | 1000.000 | 21995010 |

Curve Fit: Avg. RF

---

8) Tetrabutyltin #2 ( )

Ret. Time 5.77 min., Extract & Integrate from 5.70 to 5.84 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 40537 |
| 3 | | 5.000 | 86566 |
| 4 | | 20.000 | 350774 |
| 5 | | 50.000 | 775402 |
| 6 | | 200.000 | 3837247 |

| | | |
|---|---|---|
| 7 | 500.000 | 9298806 |
| 8 | 1000.000 | 19288505 |

Curve Fit: Avg. RF

---

9) Tri-n-butyltin #2 ( )

Ret. Time 6.71 min., Extract & Integrate from 6.64 to 6.78 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.782 | 48525 |
| 3 | | 4.455 | 111540 |
| 4 | | 17.820 | 482490 |
| 5 | | 44.550 | 1097317 |
| 6 | | 178.200 | 4892486 |
| 7 | | 445.500 | 11694324 |
| 8 | | 891.000 | 23400922 |

Curve Fit: Avg. RF

---

10) Di-n-butyltin #2 ( )

Ret. Time 7.66 min., Extract & Integrate from 7.59 to 7.73 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.533 | 50415 |
| 3 | | 3.833 | 131606 |
| 4 | | 15.330 | 517145 |
| 5 | | 38.325 | 1213416 |
| 6 | | 153.300 | 5476889 |
| 7 | | 383.250 | 13230500 |
| 8 | | 766.500 | 26500559 |

Curve Fit: Avg. RF

---

11) n-Butyltin #2 ( )

Ret. Time 8.61 min., Extract & Integrate from 8.54 to 8.68 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.246 | 49876 |
| 3 | | 3.115 | 121540 |
| 4 | | 12.460 | 452277 |
| 5 | | 31.150 | 1077508 |
| 6 | | 124.600 | 4892278 |
| 7 | | 311.500 | 12260217 |
| 8 | | 623.000 | 25482369 |

Curve Fit: Avg. RF

---

END OF DATA ANALYSIS PARAMETERS

Compound List Report GC26

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
Total Cpnds : 11

| PK# | Type | Compound Name | Exp_RT | Rel_RT | Cal | A/H | ID |
|---|---|---|---|---|---|---|---|
| 1 | S | Tri-n-propyltin | 6.14 | 1.000 | A | A | B |
| 2 | | Tetrabutyltin | 6.40 | 1.000 | A | A | B |
| 3 | | Tri-n-butyltin | 7.41 | 1.000 | A | A | B |
| 4 | | Di-n-butyltin | 8.41 | 1.000 | A | A | B |
| 5 | | n-Butyltin | 9.39 | 1.000 | A | A | B |
| 6 | | Signal #2 | 7.12 | 1.000 | A | A | B |
| 7 | S | Tri-n-propyltin #2 | 5.56 | 1.000 | A | A | B |
| 8 | | Tetrabutyltin #2 | 5.77 | 1.000 | A | A | B |
| 9 | | Tri-n-butyltin #2 | 6.71 | 1.000 | A | A | B |
| 10 | | Di-n-butyltin #2 | 7.66 | 1.000 | A | A | B |
| 11 | | n-Butyltin #2 | 8.61 | 1.000 | A | A | B |

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

083010-HTIN.M Mon Aug 30 16:14:57 2010

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA02.D\FPD1A.CH Vial: 77
Signal #2 : J:\GC26\DATA\083010A\0830FA02.D\FPD2B.CH
Acq On : 30 Aug 2010 10:32 am Operator: CCotnam
Sample : HEX Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:49:32 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 15:35:41 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

Target Compounds

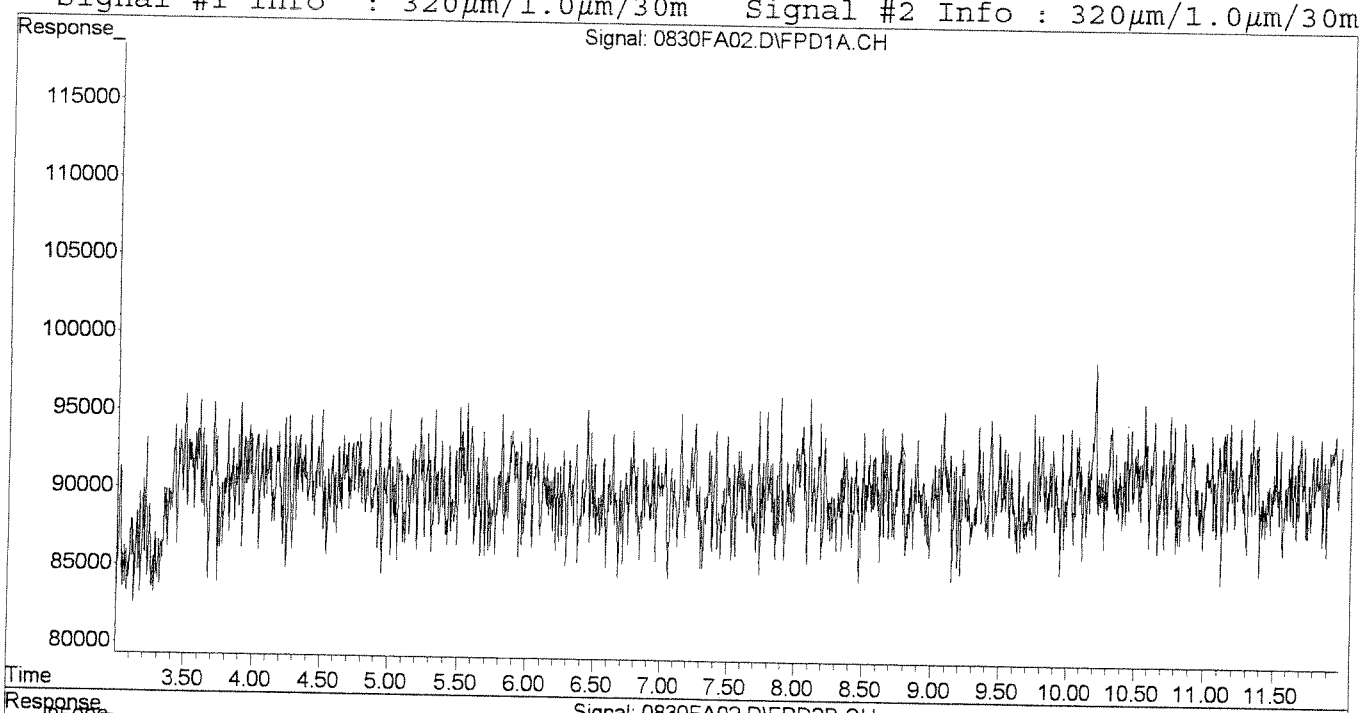
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

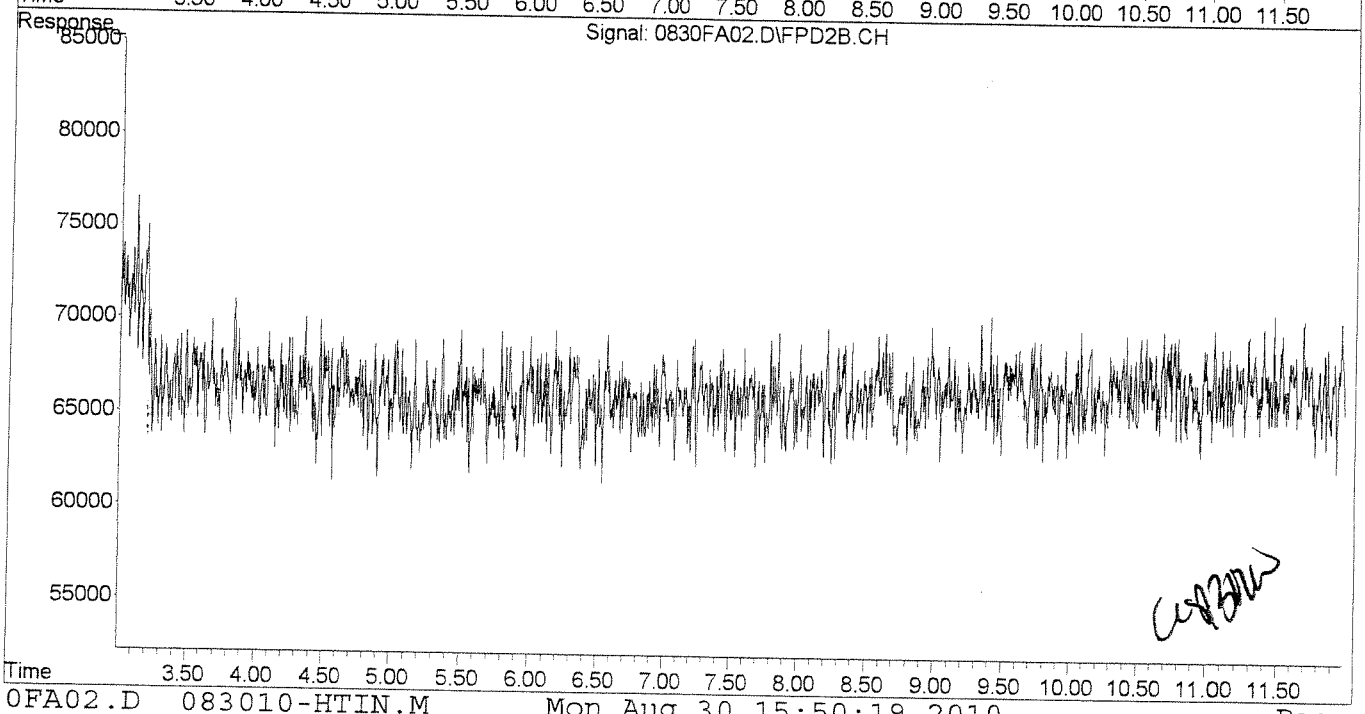
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA02.D\FPD1A.CH Vial: 77
Signal #2 : J:\GC26\DATA\083010A\0830FA02.D\FPD2B.CH
Acq On : 30 Aug 2010 10:32 am Operator: CCotnam
Sample : HEX Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:49 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 15:35:41 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA03.D\FPD1A.CH Vial: 78
Signal #2 : J:\GC26\DATA\083010A\0830FA03.D\FPD2B.CH
Acq On : 30 Aug 2010 10:48 am Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:54 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.11 | 5.54 | 49220 | 43828 | 1.215 | 1.434 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.38 | 5.74 | 40905 | 40537 | 1.229 | 1.629m# |
| 3) | Tri-n-butyltin | 7.39 | 6.69 | 70169 | 48525 | 1.530 | 1.393 |
| 4) | Di-n-butyltin | 8.40 | 7.65 | 52600 | 50415 | 0.838 | 1.138 # |
| 5) | n-Butyltin | 9.37 | 8.60 | 55242 | 49876 | 0.815 | 0.959 |

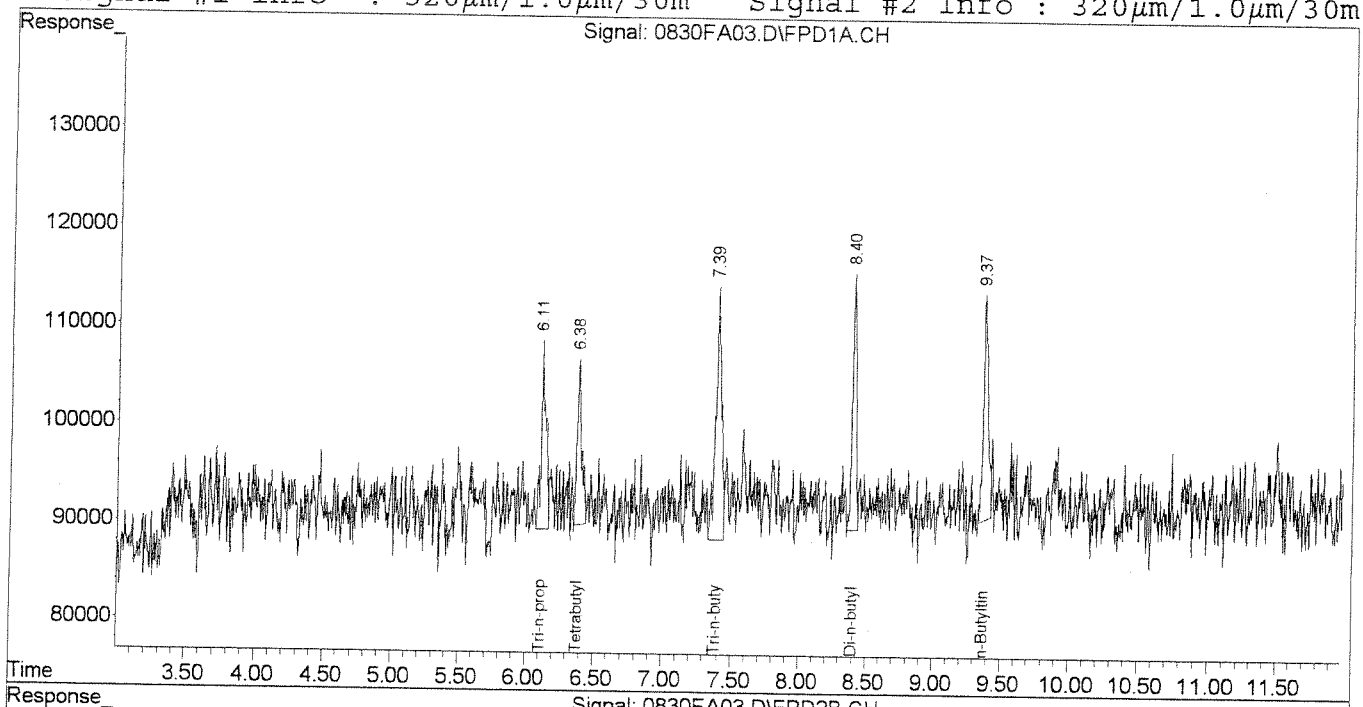
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

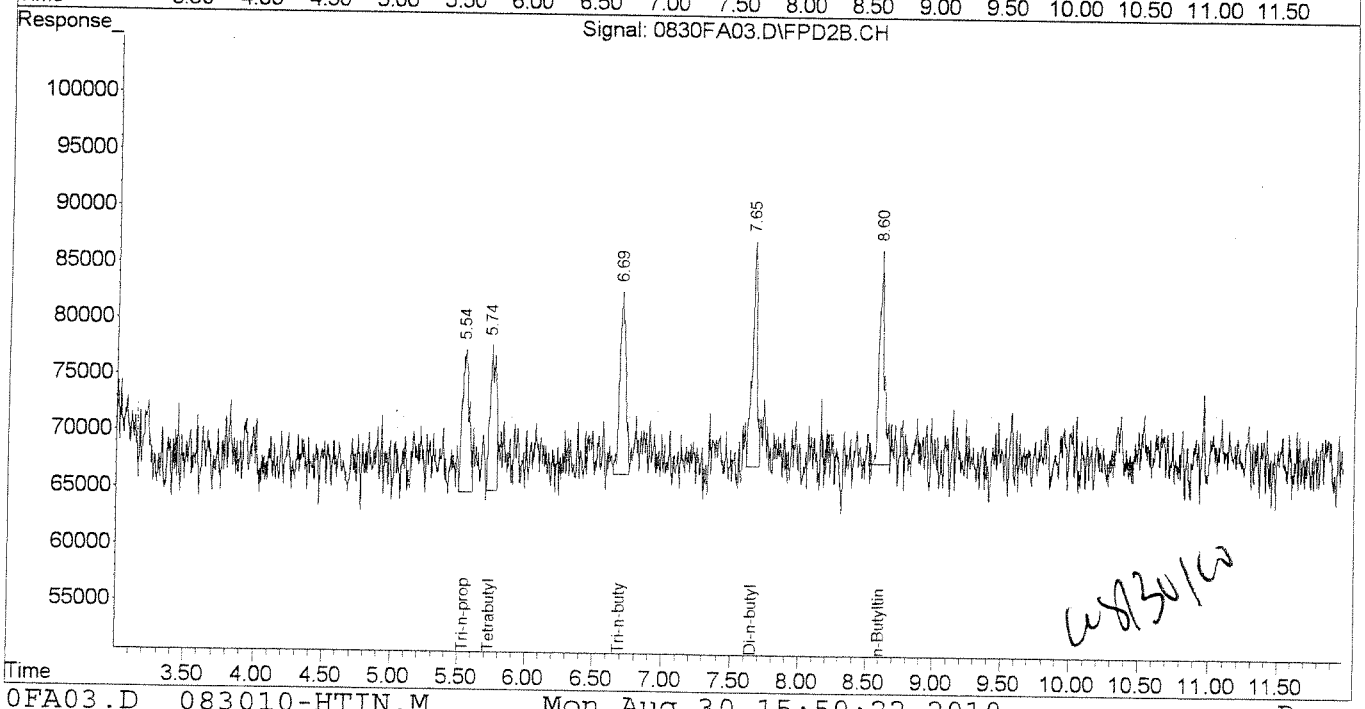
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA03.D\FPD1A.CH Vial: 78
Signal #2 : J:\GC26\DATA\083010A\0830FA03.D\FPD2B.CH
Acq On : 30 Aug 2010 10:48 am Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:33 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



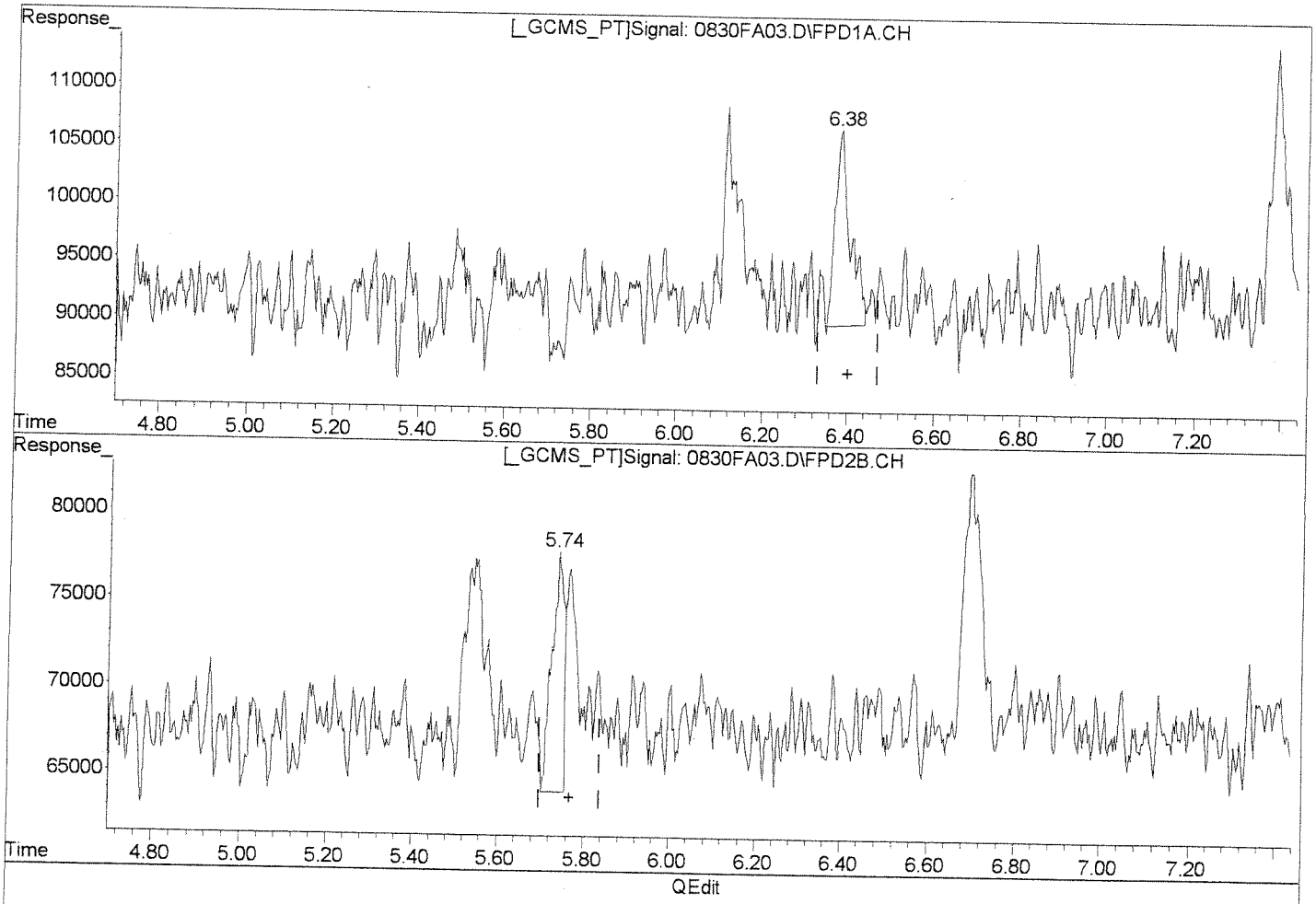




W8/30/10

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA03.D\FPD1A.CH  Vial: 78
Signal #2 : J:\GC26\DATA\083010A\0830FA03.D\FPD2B.CH
Acq On : 30 Aug 2010 10:48 am  Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010  Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration




(2) Tetrabutyltin

6.38min 1.229ng/mL

response 40905

(2) Tetrabutyltin #2

5.74min 1.067ng/mL

response 26542

Manual Integration:

Before

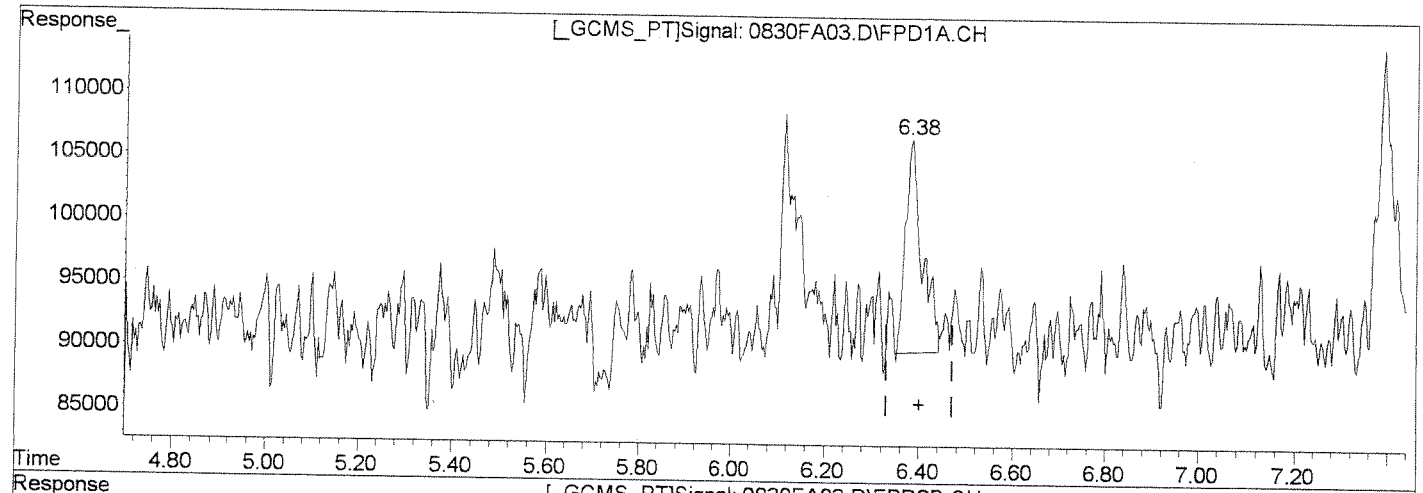
(+) = Expected Retention Time

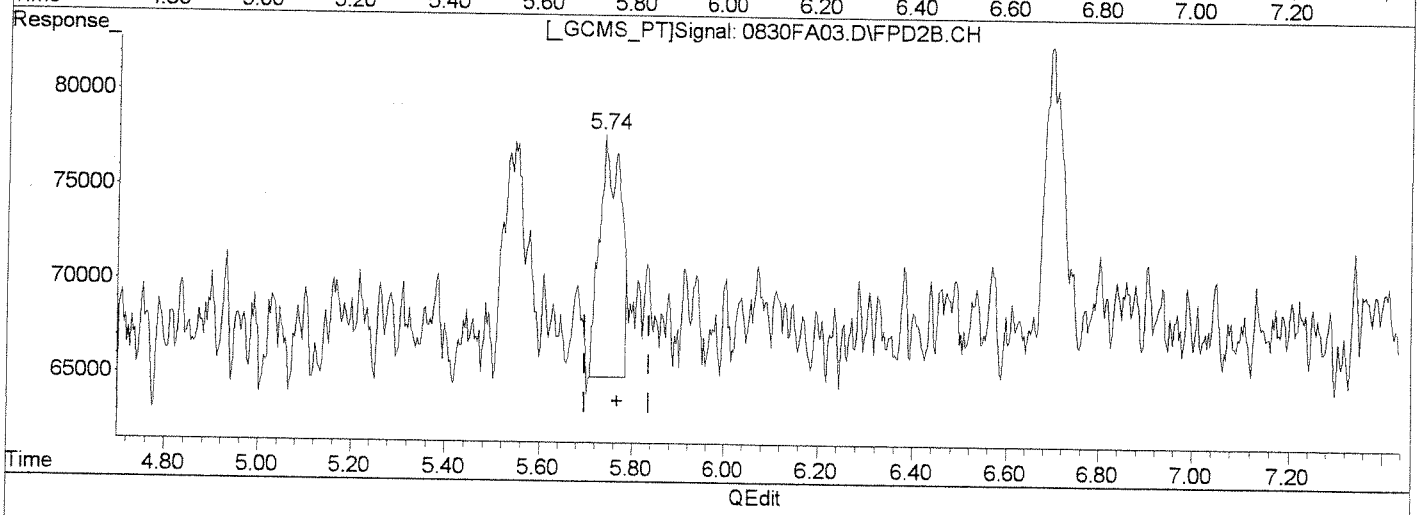
0830FA03.D 083010-HTIN.M  Mon Aug 30 15:33:25 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA03.D\FPD1A.CH Vial: 78
Signal #2 : J:\GC26\DATA\083010A\0830FA03.D\FPD2B.CH
Acq On : 30 Aug 2010 10:48 am Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration




(2) Tetrabutyltin

6.38min 1.229ng/mL

response 40905

(2) Tetrabutyltin #2

5.74min 1.629ng/mL m

response 40537

Manual Integration:

After

Baseline/Shoulder

08/30/10

Ma 1/10

(+) = Expected Retention Time

0830FA03.D 083010-HTIN.M Mon Aug 30 15:33:33 2010

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA04.D\FPD1A.CH Vial: 79
Signal #2 : J:\GC26\DATA\083010A\0830FA04.D\FPD2B.CH
Acq On : 30 Aug 2010 11:05 am Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:54 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.12 | 5.54 | 98805 | 96896 | 2.439 | 3.170m# |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.38 | 5.75 | 82487 | 86566 | 2.478 | 3.479 # |
| 3) | Tri-n-butyltin | 7.39 | 6.70 | 119227 | 111540 | 2.599 | 3.203 |
| 4) | Di-n-butyltin | 8.39 | 7.66 | 133669 | 131606 | 2.130 | 2.970 # |
| 5) | n-Butyltin | 9.38 | 8.60 | 121331 | 121540 | 1.791 | 2.337 # |

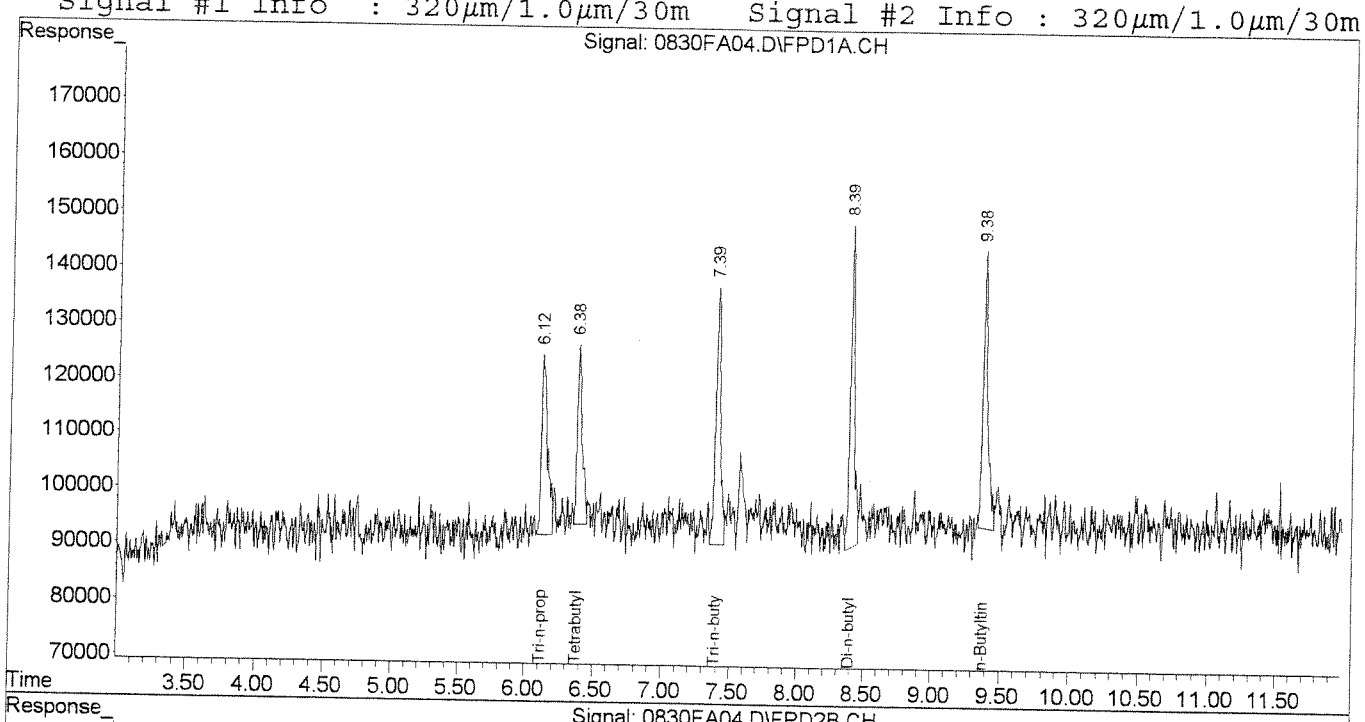
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

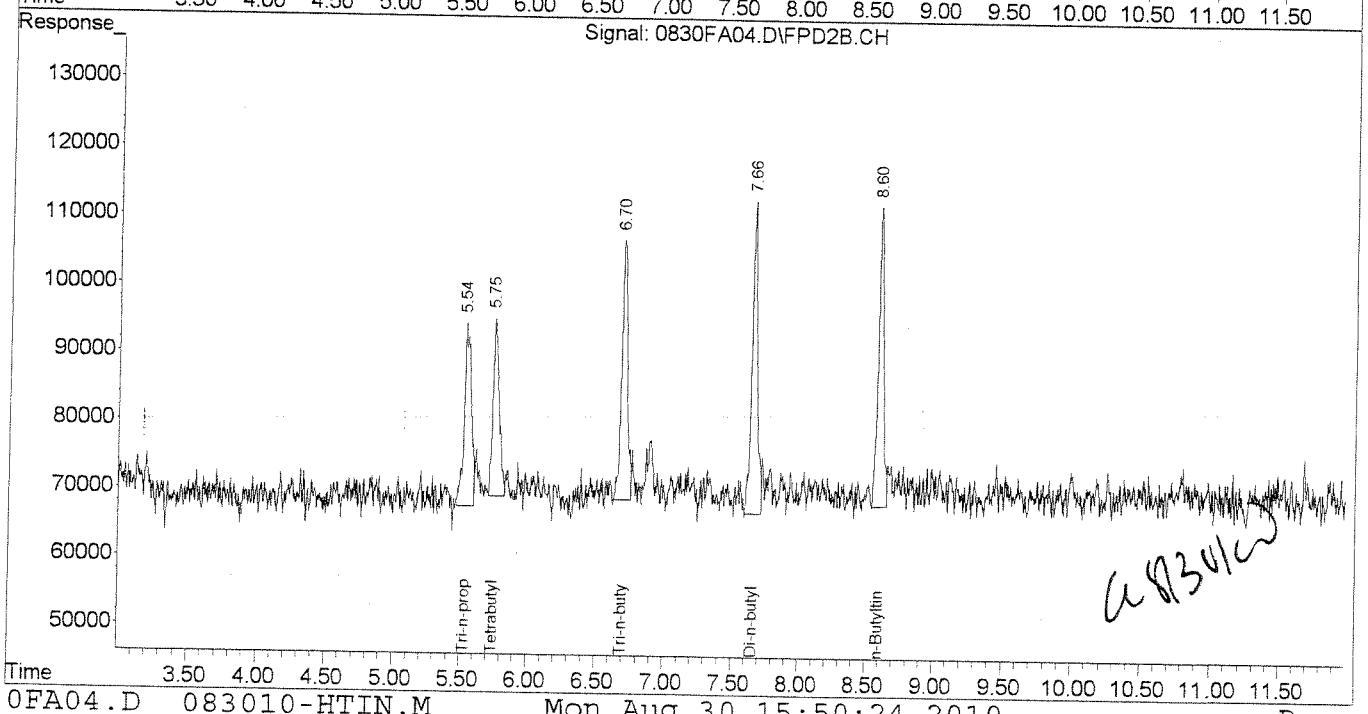
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA04.D\FPD1A.CH Vial: 79
Signal #2 : J:\GC26\DATA\083010A\0830FA04.D\FPD2B.CH
Acq On : 30 Aug 2010 11:05 am Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:33 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

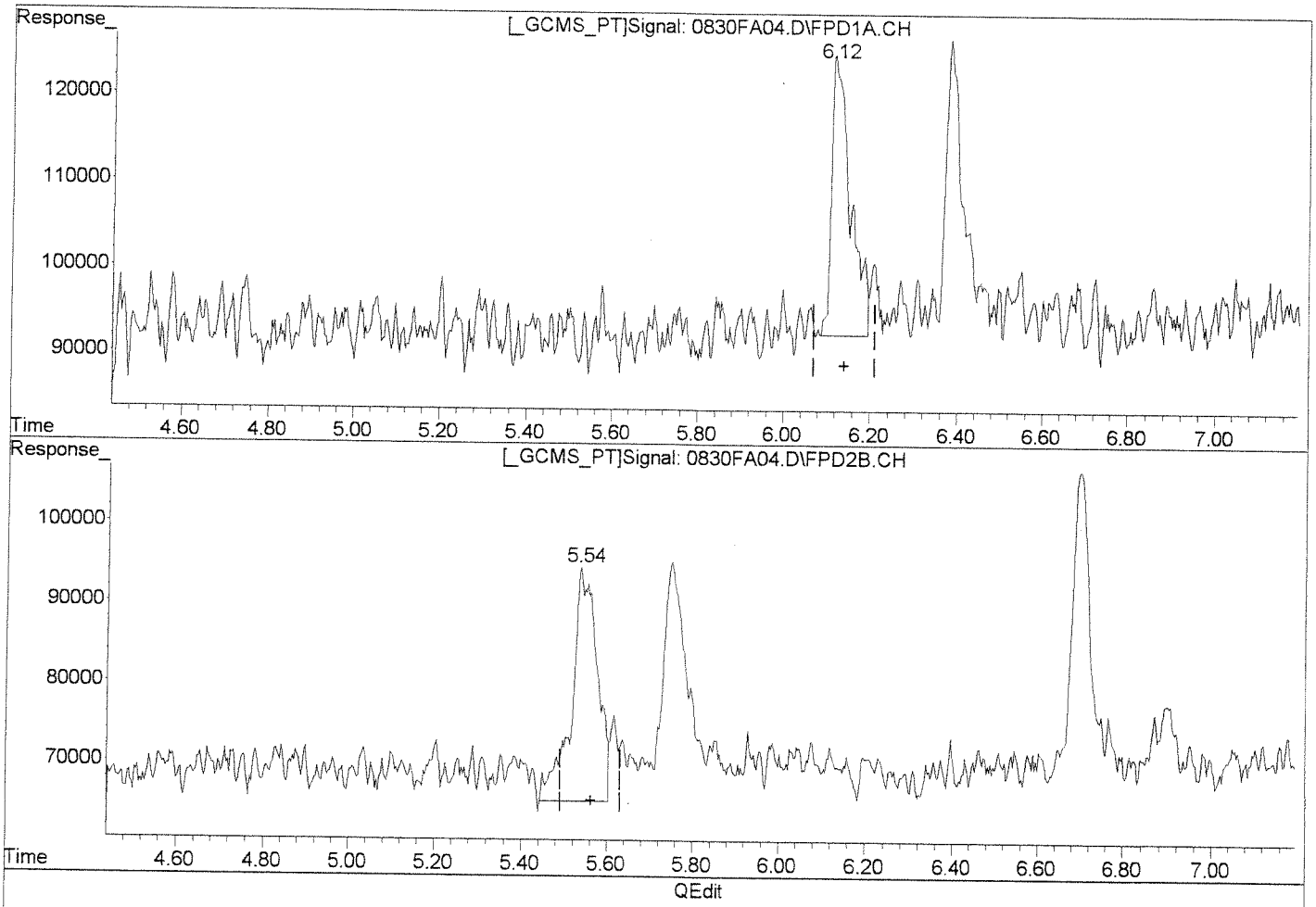


Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA04.D\FPD1A.CH Vial: 79
Signal #2 : J:\GC26\DATA\083010A\0830FA04.D\FPD2B.CH
Acq On : 30 Aug 2010 11:05 am Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration




(1) Tri-n-propyltin (S)

6.12min 2.439ng/mL

response 98805

Manual Integration:

Before

(1) Tri-n-propyltin #2 (S)

5.54min 4.002ng/mL

response 122352

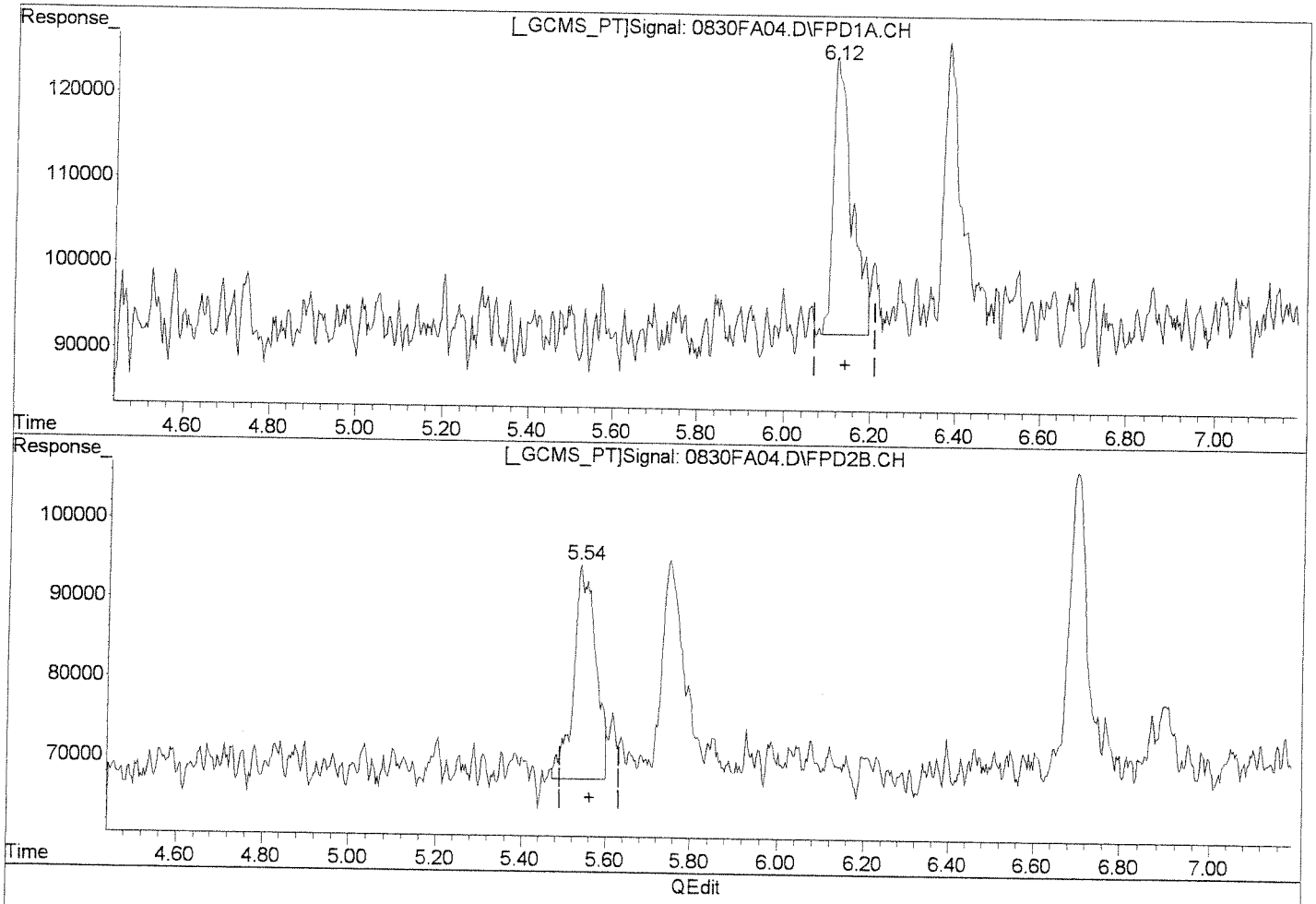
(+) = Expected Retention Time

0830FA04.D 083010-HTIN.M Mon Aug 30 15:33:46 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA04.D\FPD1A.CH  Vial: 79
Signal #2 : J:\GC26\DATA\083010A\0830FA04.D\FPD2B.CH
Acq On : 30 Aug 2010 11:05 am  Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010  Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration




(1) Tri-n-propyltin (S)
6.12min 2.439ng/mL
response 98805

(1) Tri-n-propyltin #2 (S)
5.54min 3.170ng/mL m
response 96896

Manual Integration:
After
Baseline/Shoulder
08/30/10

9/1/10

(+) = Expected Retention Time
0830FA04.D 083010-HTIN.M  Mon Aug 30 15:33:54 2010

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA05.D\FPD1A.CH Vial: 80
Signal #2 : J:\GC26\DATA\083010A\0830FA05.D\FPD2B.CH
Acq On : 30 Aug 2010 11:21 am Operator: CCotnam
Sample : HTINS@ 20PPB OT4-28K Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:55 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.12 | 5.54 | 499877 | 454954 | 12.339 | 14.882 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.38 | 5.75 | 362569 | 350774 | 10.891 | 14.097 # |
| 3) | Tri-n-butyltin | 7.39 | 6.70 | 490949 | 482490 | 10.703 | 13.854 # |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 535360 | 517145 | 8.532 | 11.669 # |
| 5) | n-Butyltin | 9.38 | 8.60 | 485019 | 452277 | 7.158 | 8.696 |

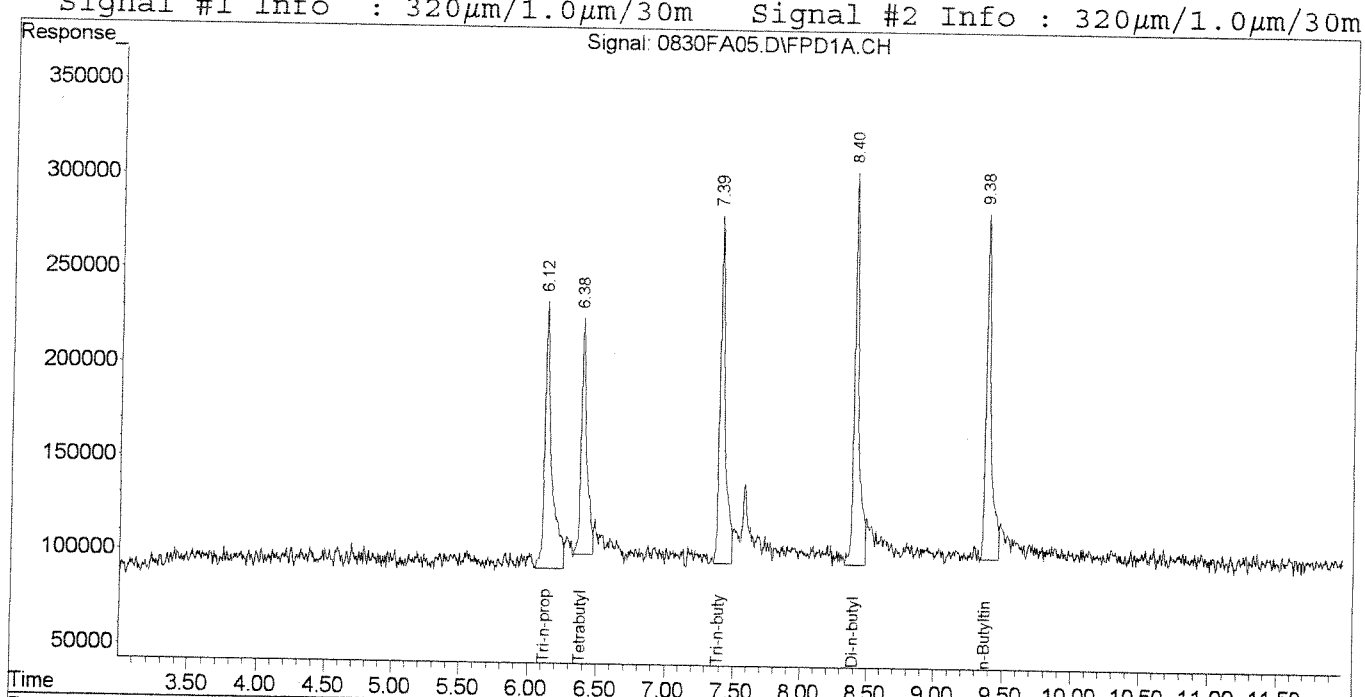
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

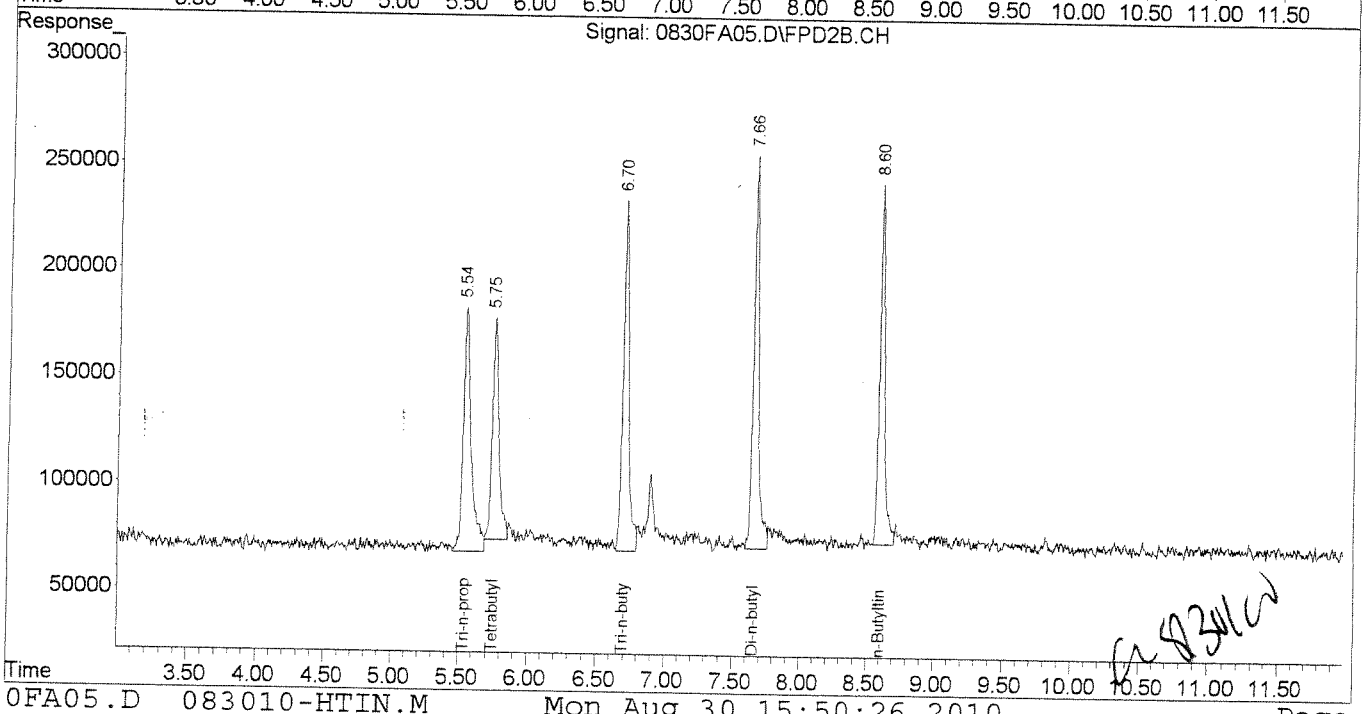
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA05.D\FPD1A.CH Vial: 80
Signal #2 : J:\GC26\DATA\083010A\0830FA05.D\FPD2B.CH
Acq On : 30 Aug 2010 11:21 am Operator: CCotnam
Sample : HTINS@ 20PPB OT4-28K Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA07.D\FPD1A.CH Vial: 82
Signal #2 : J:\GC26\DATA\083010A\0830FA07.D\FPD2B.CH
Acq On : 30 Aug 2010 11:54 am Operator: CCotnam
Sample : HTINS@ 200PPB OT4-28L Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:56 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.13 | 5.54 | 5222155 | 4495682 | 128.899 | 147.063 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.39 | 5.75 | 4550273 | 3837247 | 136.686 | 154.216 |
| 3) | Tri-n-butyltin | 7.40 | 6.70 | 5486656 | 4892486 | 119.607 | 140.483 |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 6675615 | 5476889 | 106.387 | 123.584 |
| 5) | n-Butyltin | 9.38 | 8.60 | 5870536 | 4892278 | 86.634 | 94.060 |

CJB 8/12

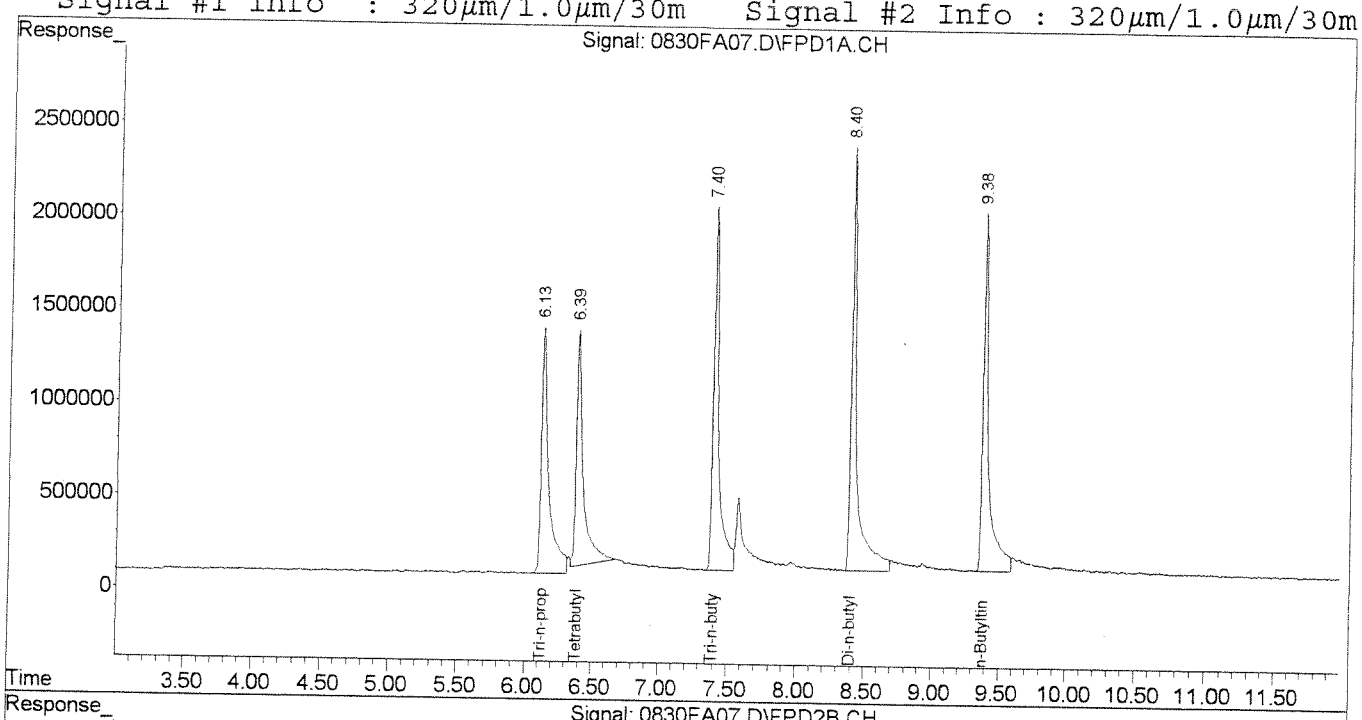
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

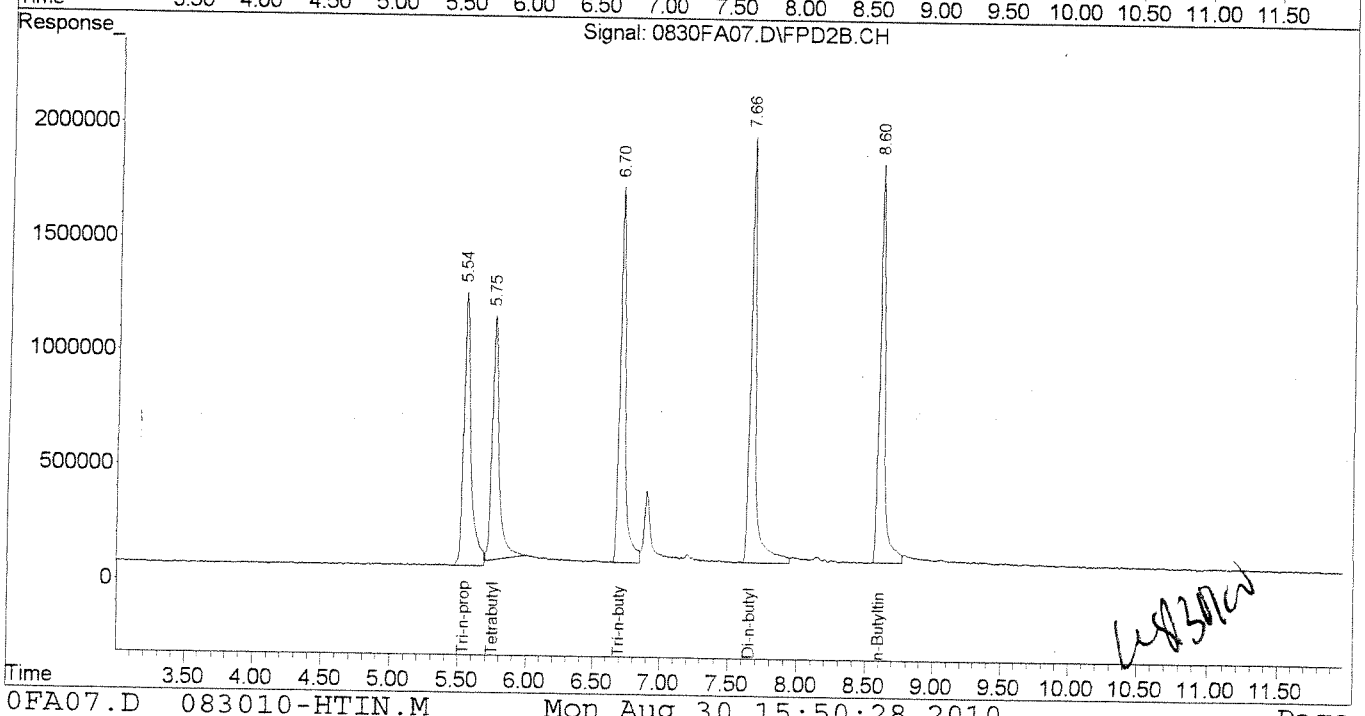
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA07.D\FPD1A.CH Vial: 82
Signal #2 : J:\GC26\DATA\083010A\0830FA07.D\FPD2B.CH
Acq On : 30 Aug 2010 11:54 am Operator: CCotnam
Sample : HTINS@ 200PPB OT4-28L Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA08.D\FPD1A.CH Vial: 83
Signal #2 : J:\GC26\DATA\083010A\0830FA08.D\FPD2B.CH
Acq On : 30 Aug 2010 12:11 pm Operator: CCotnam
Sample : HTINS@ 500PPB OT4-28M Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:56 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.13 | 5.54 | 13473281 | 10881210 | 332.563 | 355.947 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.39 | 5.75 | 12439373 | 9298806 | 373.668 | 373.713 |
| 3) | Tri-n-butyltin | 7.40 | 6.70 | 13943890 | 11694324 | 303.972 | 335.791 |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 16414208 | 13230500 | 261.587 | 298.542 |
| 5) | n-Butyltin | 9.38 | 8.60 | 15638482 | 12260217 | 230.784 | 235.719 |

CC 8/31/10

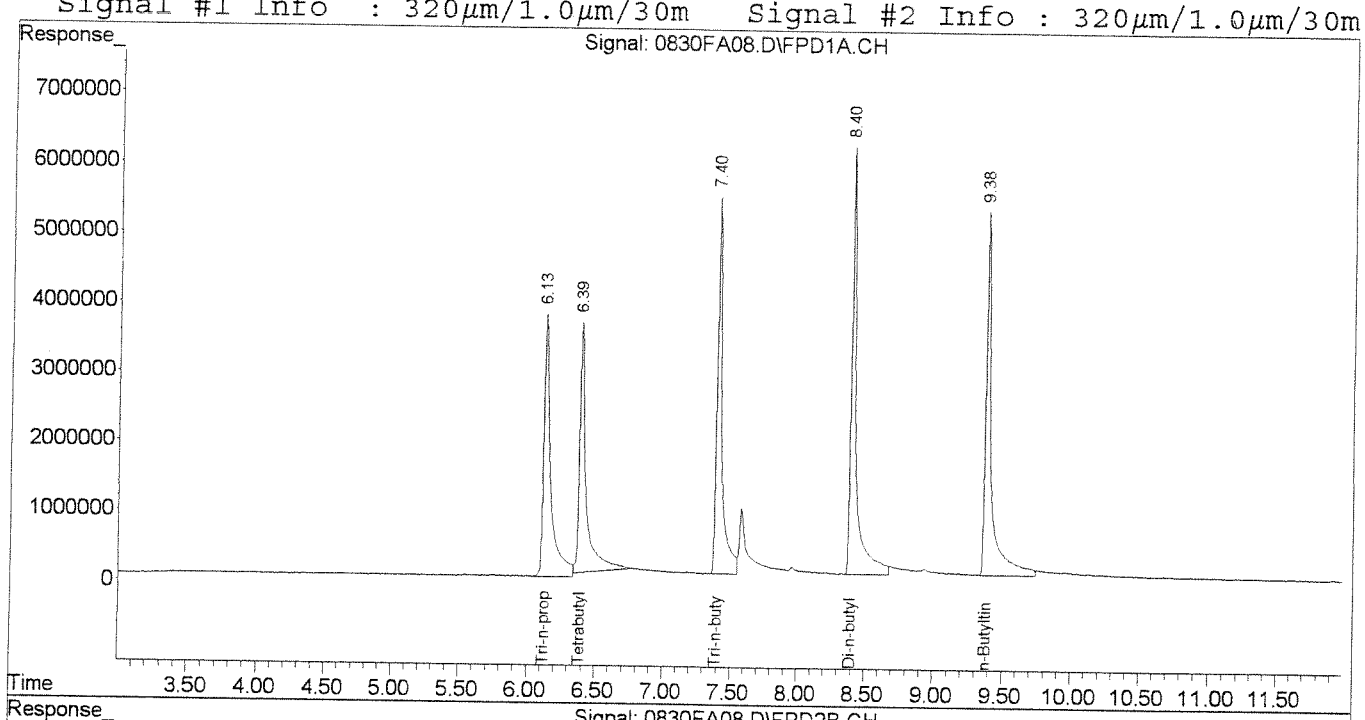
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

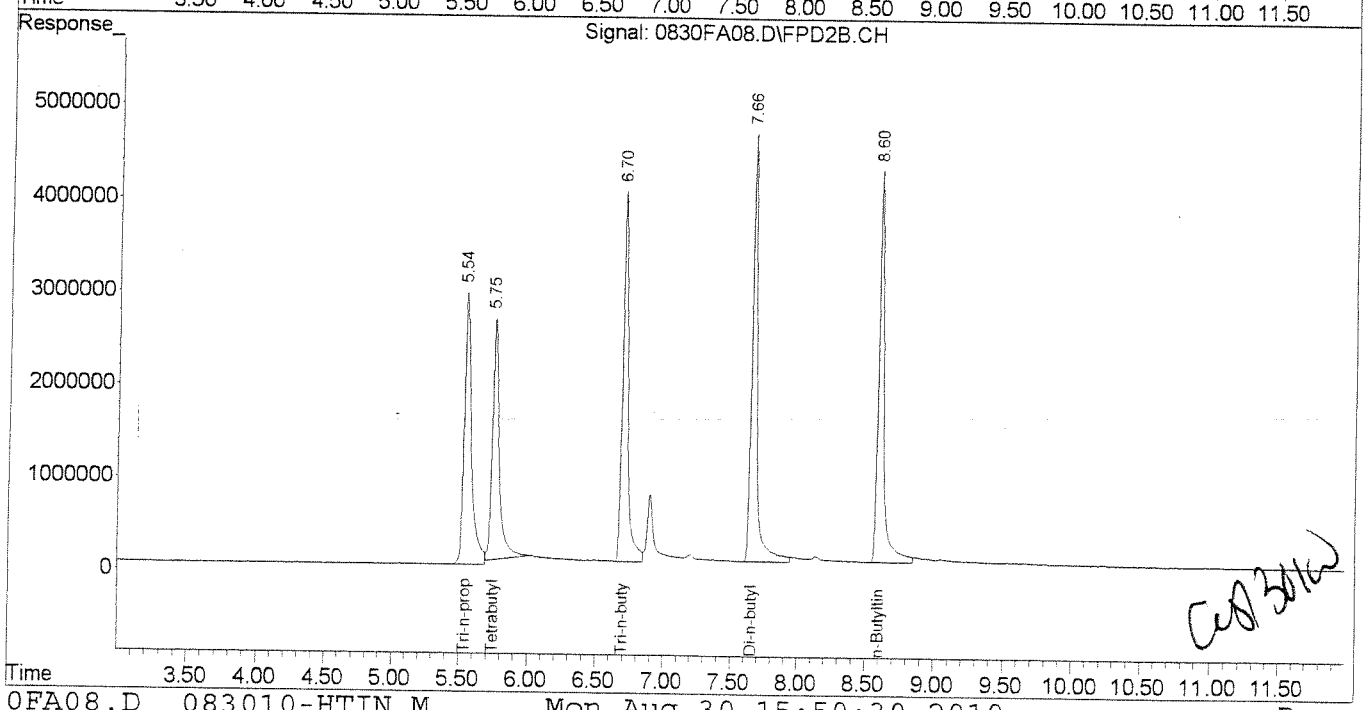
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA08.D\FPD1A.CH Vial: 83
Signal #2 : J:\GC26\DATA\083010A\0830FA08.D\FPD2B.CH
Acq On : 30 Aug 2010 12:11 pm Operator: CCotnam
Sample : HTINS@ 500PPB OT4-28M Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m




CB 3/16

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA09.D\FPD1A.CH Vial: 84
Signal #2 : J:\GC26\DATA\083010A\0830FA09.D\FPD2B.CH
Acq On : 30 Aug 2010 12:28 pm Operator: CCotnam
Sample : HTINS@ 1000PPB OT4-28N Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10:56 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.12 | 5.54 | 27661219 | 21995010 | 682.766 | 719.502 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.39 | 5.75 | 25297918 | 19288505 | 759.927 | 775.192 |
| 3) | Tri-n-butyltin | 7.40 | 6.70 | 28507675 | 23400922 | 621.457 | 671.935 |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 34704259 | 26500559 | 553.068 | 597.976 |
| 5) | n-Butyltin | 9.38 | 8.60 | 31912194 | 25482369 | 470.942 | 489.932 |

CC 8/30/10

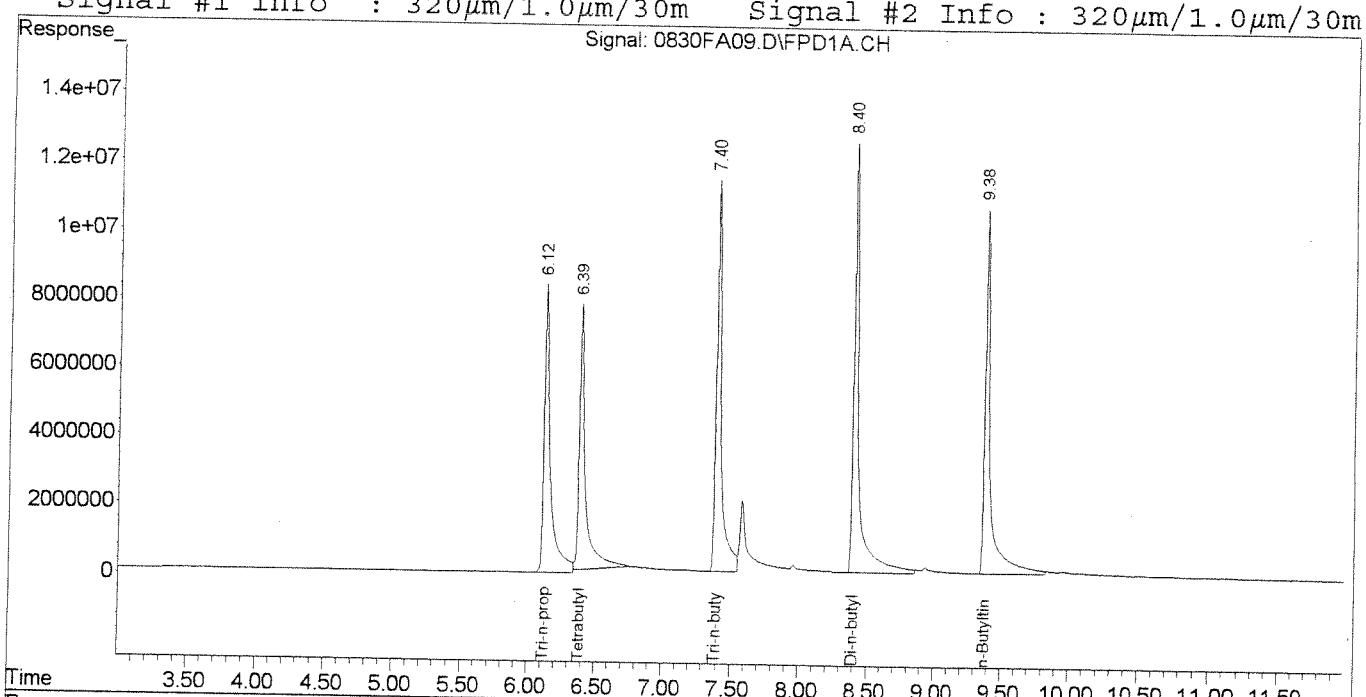
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

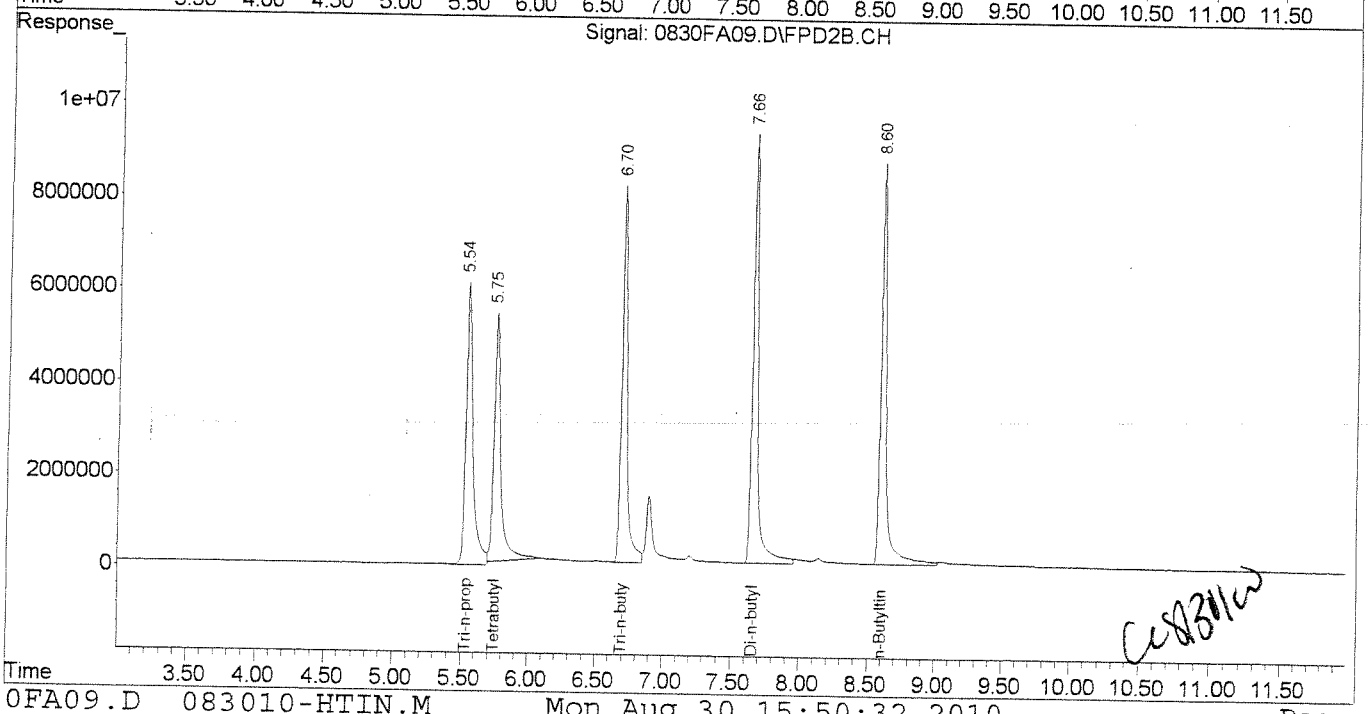
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA09.D\FPD1A.CH Vial: 84
Signal #2 : J:\GC26\DATA\083010A\0830FA09.D\FPD2B.CH
Acq On : 30 Aug 2010 12:28 pm Operator: CCotnam
Sample : HTINS@ 1000PPB OT4-28N Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:10 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m




CC 8/31/10

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA11.D\FPD1A.CH Vial: 81
Signal #2 : J:\GC26\DATA\083010A\0830FA11.D\FPD2B.CH
Acq On : 30 Aug 2010 3:17 pm Operator: CCotnam
Sample : HTINS@ 50PPB OT4-28G Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:32:35 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL | |
|---|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | | |
| 1) S | Tri-n-propyltin | 6.12 | 5.54 | 1093465 | 948291 | 26.990 | 31.021 | |
| | Target Compounds | | | | | | | |
| 2) | Tetrabutyltin | 6.38 | 5.74 | 796133 | 775402 | 23.915 | 31.163 | # |
| 3) | Tri-n-butyltin | 7.39 | 6.69 | 1212250 | 1097317 | 26.427 | 31.508 | |
| 4) | Di-n-butyltin | 8.40 | 7.65 | 1353979 | 1213416 | 21.578 | 27.380 | # |
| 5) | n-Butyltin | 9.37 | 8.59 | 1232373 | 1077508 | 18.187 | 20.716 | |

CS 83011

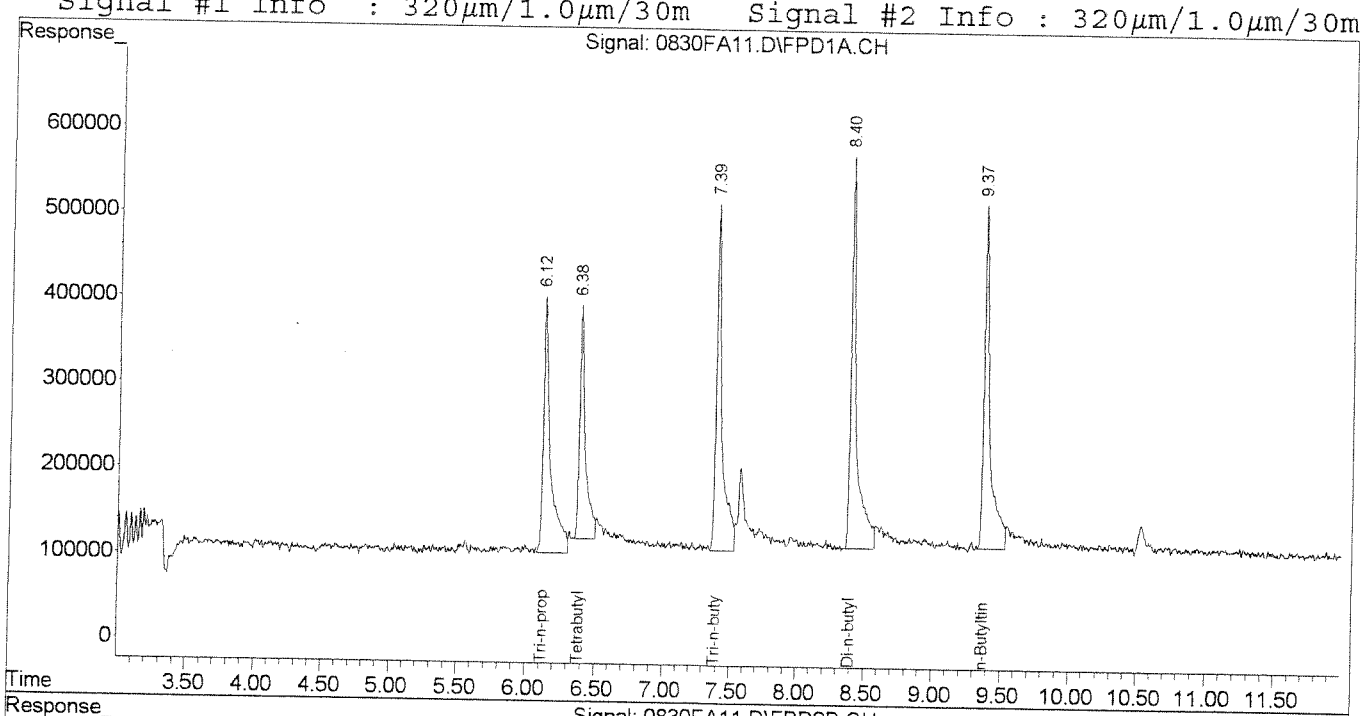
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

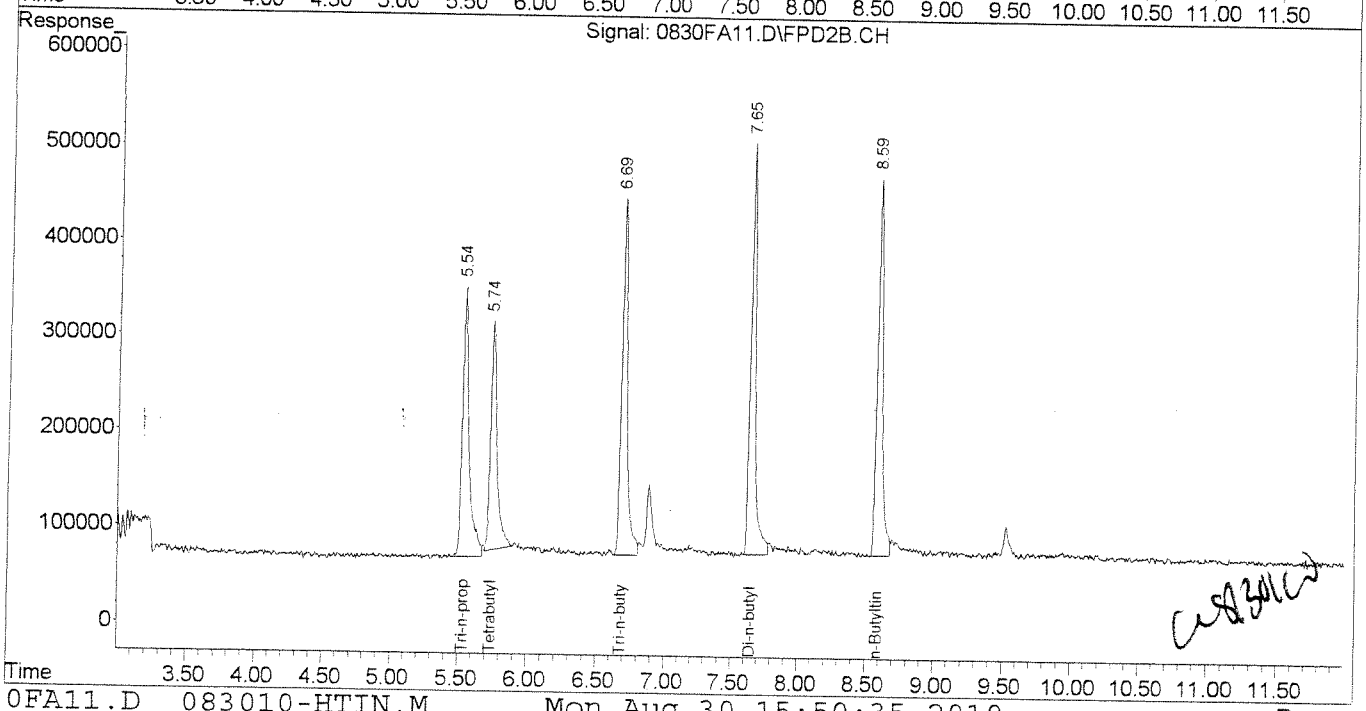
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA11.D\FPD1A.CH Vial: 81
Signal #2 : J:\GC26\DATA\083010A\0830FA11.D\FPD2B.CH
Acq On : 30 Aug 2010 3:17 pm Operator: CCotnam
Sample : HTINS@ 50PPB OT4-28G Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 15:32 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Thu Aug 26 08:51:30 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA12.D\FPD1A.CH Vial: 85
Signal #2 : J:\GC26\DATA\083010A\0830FA12.D\FPD2B.CH
Acq On : 30 Aug 2010 3:34 pm Operator: CCotnam
Sample : HTINS @ 50PPB OT4-280 Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 16:06:31 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.38 | 5.75 | 1102652 | 982967 | 53.628 | 53.882 |
| 3) | Tri-n-butyltin | 7.39 | 6.70 | 1057399 | 965355 | 36.128m | 36.737 |
| 4) | Di-n-butyltin | 8.40 | 7.65 | 1434600 | 1364217 | 37.043 | 40.218 |
| 5) | n-Butyltin | 9.38 | 8.60 | 1366634 | 1192825 | 30.828 | 30.987 |

LC 83010

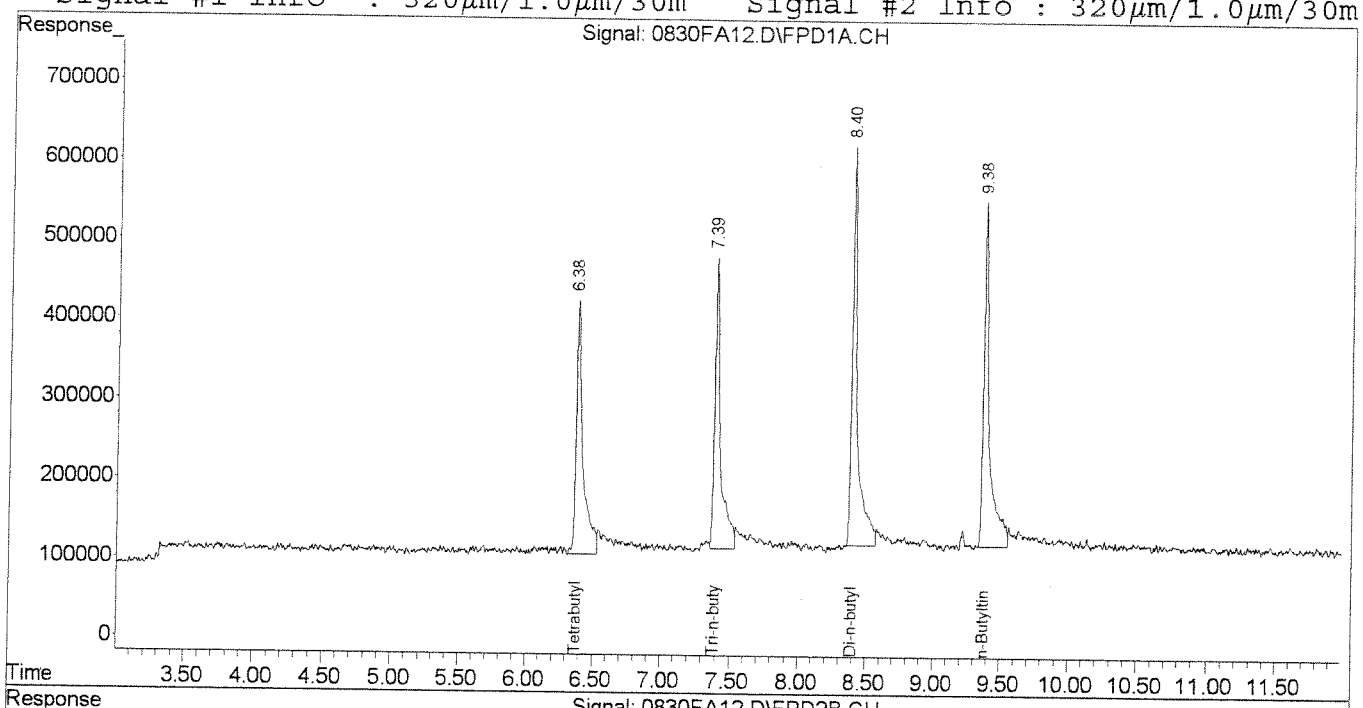
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

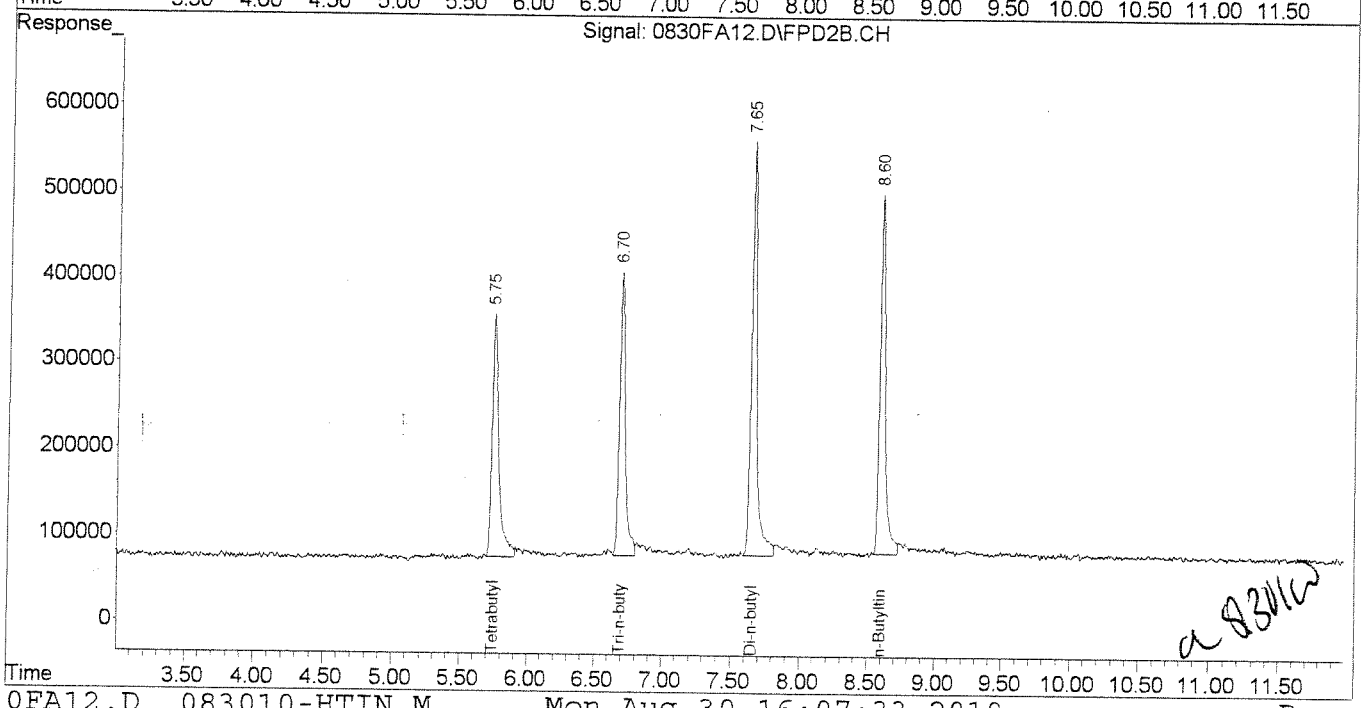
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\083010A\0830FA12.D\FPD1A.CH Vial: 85
Signal #2 : J:\GC26\DATA\083010A\0830FA12.D\FPD2B.CH
Acq On : 30 Aug 2010 3:34 pm Operator: CCotnam
Sample : HTINS @ 50PPB OT4-280 Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 16:06 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



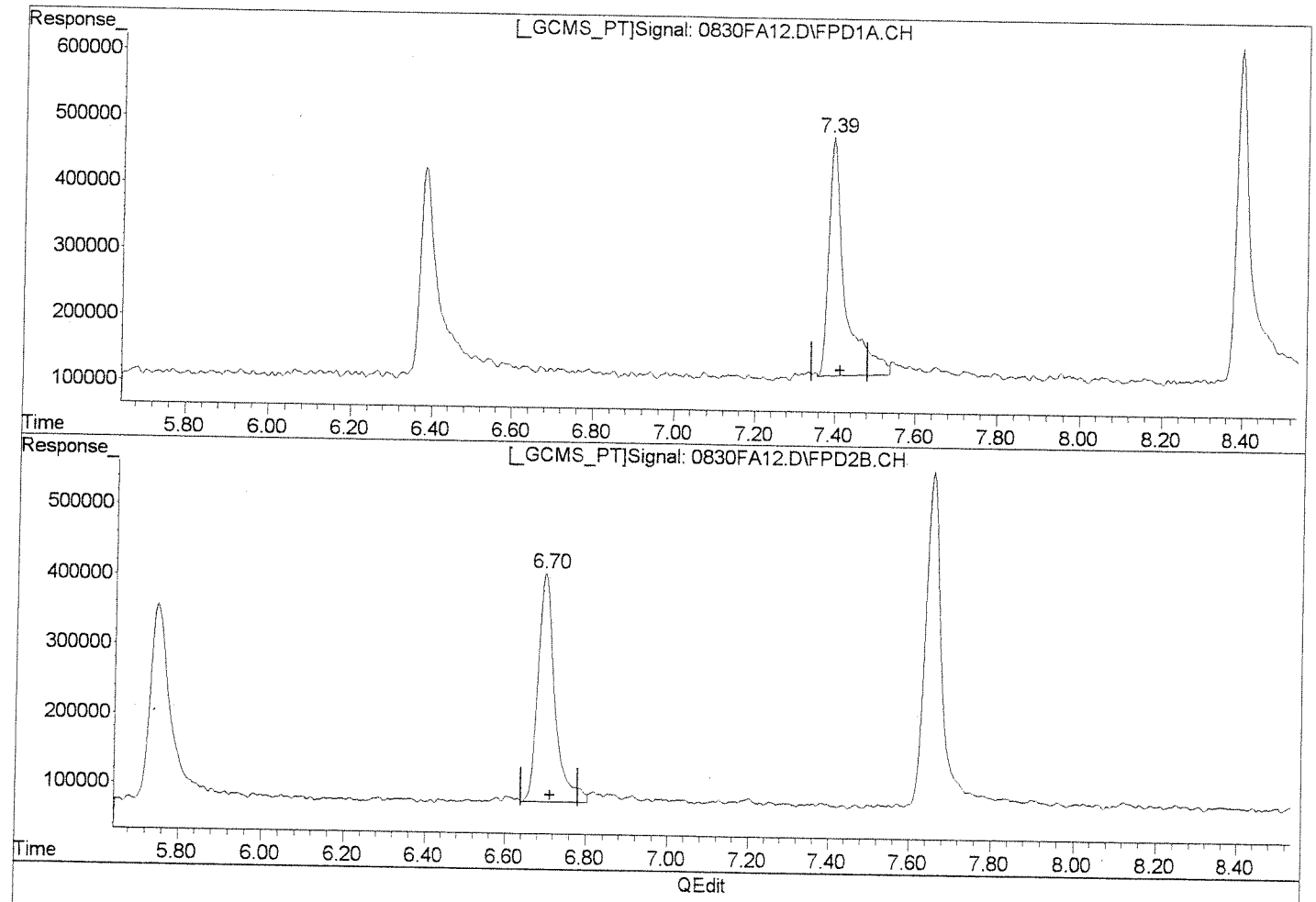




a 83112

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA12.D\FPD1A.CH  Vial: 85
Signal #2 : J:\GC26\DATA\083010A\0830FA12.D\FPD2B.CH
Acq On : 30 Aug 2010 3:34 pm  Operator: CCotnam
Sample : HTINS @ 50PPB OT4-28O  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 16:06 2010  Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




(3) Tri-n-butyltin

7.39min 34.292ng/mL

response 1003660

(3) Tri-n-butyltin #2

6.70min 36.737ng/mL

response 965355

Manual Integration:

Before

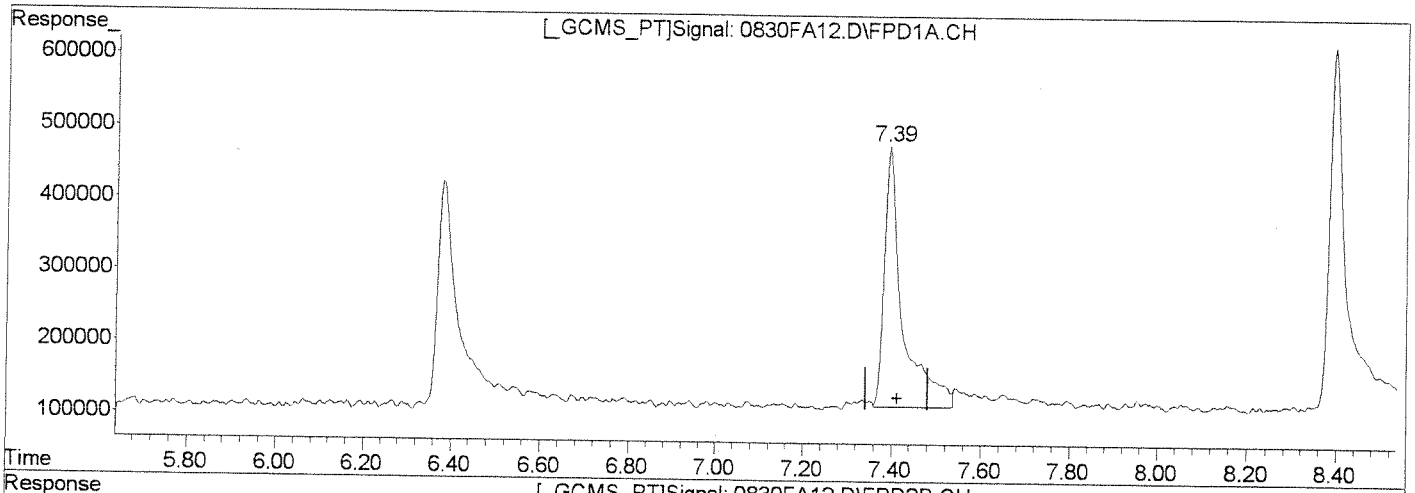
(+) = Expected Retention Time

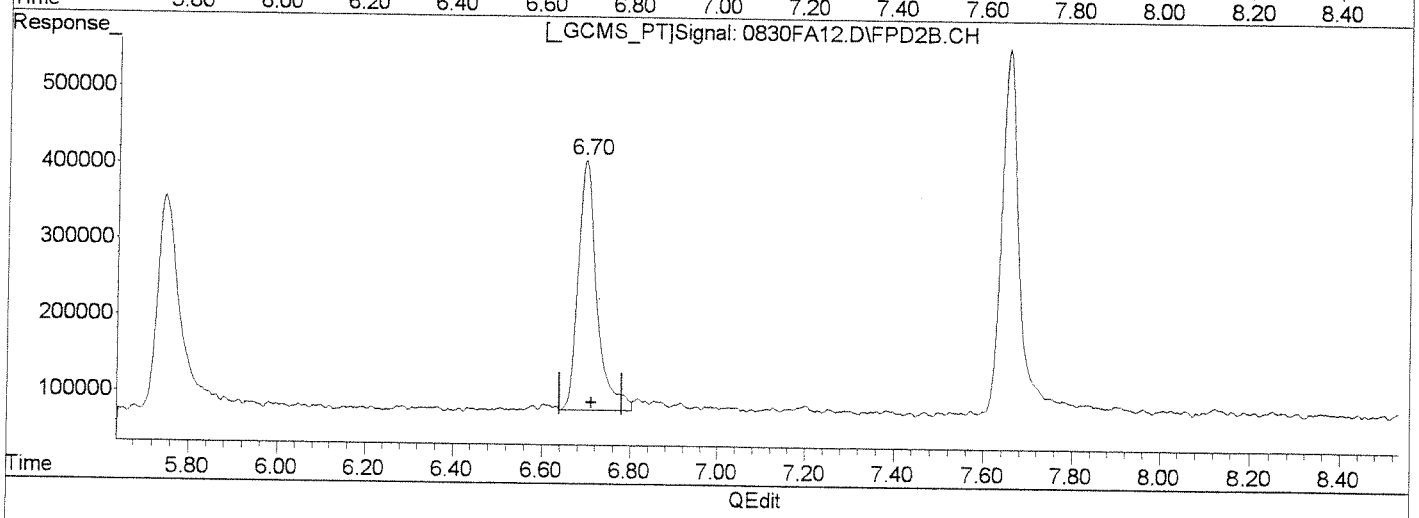
0830FA12.D 083010-HTIN.M  Mon Aug 30 16:06:48 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\083010A\0830FA12.D\FPD1A.CH  Vial: 85
Signal #2 : J:\GC26\DATA\083010A\0830FA12.D\FPD2B.CH
Acq On : 30 Aug 2010 3:34 pm  Operator: CCotnam
Sample : HTINS @ 50PPB OT4-28O  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Aug 30 16:06 2010  Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




(3) Tri-n-butyltin
7.39min 36.128ng/mL m
response 1057399

(3) Tri-n-butyltin #2
6.70min 36.737ng/mL
response 965355

Manual Integration:
After
Baseline/Shoulder
08/30/10

(+) = Expected Retention Time
0830FA12.D 083010-HTIN.M  Mon Aug 30 16:06:59 2010

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

**Initial Calibration Summary**
**Butyltins (as cation)**

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-1

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\091510B\0915FA03.D | E | J:\GC26\DATA\091510B\0915FA07.D |
| B | J:\GC26\DATA\091510B\0915FA04.D | F | J:\GC26\DATA\091510B\0915FA08.D |
| C | J:\GC26\DATA\091510B\0915FA05.D | G | J:\GC26\DATA\091510B\0915FA09.D |
| D | J:\GC26\DATA\091510B\0915FA06.D | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | | B | 5.0 | 12900 | C | 20 | 12000 | D | 50 | 15800 | E | 200 | 17800 |
| | F | 500 | 18900 | G | 1000 | 19700 | | | | | | | | | |
| Tri-n-butyltin Cation | | | | B | 4.5 | 23300 | C | 18 | 18400 | D | 45 | 23100 | E | 180 | 25000 |
| | F | 450 | 26100 | G | 890 | 26600 | | | | | | | | | |
| Di-n-butyltin Cation | | | | B | 3.8 | 22600 | C | 15 | 23800 | D | 38 | 29100 | E | 150 | 32100 |
| | F | 380 | 35600 | G | 770 | 35300 | | | | | | | | | |
| n-Butyltin Cation | | | | B | 3.1 | 27500 | C | 12 | 32400 | D | 31 | 35800 | E | 120 | 38300 |
| | F | 310 | 40500 | G | 620 | 41400 | | | | | | | | | |
| Tri-n-propyltin | | | | B | 5.0 | 15600 | C | 20 | 19200 | D | 50 | 18900 | E | 200 | 21500 |
| | F | 500 | 22500 | G | 1000 | 23900 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-1

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 19.8 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 12.5 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 18.9 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 14.7 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 14.7 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010
**Date Analyzed:** 09/15/2010

**Second Source Calibration Verification**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration ID:** CAL9871
**Units:** ng/mL

**File ID:** J:\GC26\DATA\091510B\0915FA10.D

**Column ID:** RTX-1

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 16200 | 15800 | -3 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 35 | 23700 | 18700 | -21 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 39 | 29700 | 30600 | 3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 29 | 36000 | 33200 | -8 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-35

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\GC26\DATA\091510B\0915FA03.D\0915FA03c.d | E | J:\GC26\DATA\091510B\0915FA07.D\0915FA07c.d |
| B | J:\GC26\DATA\091510B\0915FA04.D\0915FA04c.d | F | J:\GC26\DATA\091510B\0915FA08.D\0915FA08c.d |
| C | J:\GC26\DATA\091510B\0915FA05.D\0915FA05c.d | G | J:\GC26\DATA\091510B\0915FA09.D\0915FA09c.d |
| D | J:\GC26\DATA\091510B\0915FA06.D\0915FA06c.d | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | A | 2.0 | 22800 | B | 5.0 | 20100 | C | 20 | 14100 | D | 50 | 16500 | E | 200 | 17100 |
| | F | 500 | 17700 | G | 1000 | 18500 | | | | | | | | | |
| Tri-n-butyltin Cation | A | 1.8 | 26200 | B | 4.5 | 25700 | C | 18 | 21700 | D | 45 | 25800 | E | 180 | 25000 |
| | F | 450 | 25000 | G | 890 | 26100 | | | | | | | | | |
| Di-n-butyltin Cation | A | 1.5 | 29400 | B | 3.8 | 30700 | C | 15 | 28400 | D | 38 | 30800 | E | 150 | 32000 |
| | F | 380 | 32300 | G | 770 | 33600 | | | | | | | | | |
| n-Butyltin Cation | A | 1.2 | 39400 | B | 3.1 | 38500 | C | 12 | 32800 | D | 31 | 34500 | E | 120 | 36300 |
| | F | 310 | 37100 | G | 620 | 39200 | | | | | | | | | |
| Tri-n-propyltin | A | 2.0 | 22100 | B | 5.0 | 19300 | C | 20 | 19000 | D | 50 | 21400 | E | 200 | 21200 |
| | F | 500 | 21200 | G | 1000 | 22300 | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Calibration Date:** 09/15/2010

## Initial Calibration Summary
## Butyltins (as cation)

**Calibration ID:** CAL9871
**Instrument ID:** GC26

**Column:** RTX-35

| Analyte Name | Compound Type | Calibration Evaluation | | | | |
|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria |
| Tetra-n-butyltin | MS | AverageRF | % RSD | 15.3 | | ≤ 20 |
| Tri-n-butyltin Cation | MS | AverageRF | % RSD | 6.2 | | ≤ 20 |
| Di-n-butyltin Cation | MS | AverageRF | % RSD | 5.7 | | ≤ 20 |
| n-Butyltin Cation | MS | AverageRF | % RSD | 6.8 | | ≤ 20 |
| Tri-n-propyltin | SURR | AverageRF | % RSD | 6.2 | | ≤ 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Calibration Date:** | 09/15/2010 |
| | | **Date Analyzed:** | 09/15/2010 |

**Second Source Calibration Verification**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration ID:** | CAL9871 |
| **Analysis Method:** | Krone | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510B\0915FA10.D\0915FA10c.d | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 18100 | 17700 | -2 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 35 | 25100 | 19900 | -21 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 37 | 31000 | 30300 | -3 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 30 | 36800 | 34900 | -5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

Comment:
Operator: CCotnam
Data Path: C:\GC26\DATA\091510B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 9871

| Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|
| 1 | IB | 76 | 0915FA01 | TINS2 | HEX |
| 2 | IB | 77 | 0915FA02 | TINS2 | HEX |
| 3 | ICAL | 78 | 0915FA03 | TINS2 | HTINS@ 2PPB OT4-28I |
| 4 | ICAL | 79 | 0915FA04 | TINS2 | HTINS@ 5PPB OT4-28J |
| 5 | ICAL | 80 | 0915FA05 | TINS2 | HTINS@ 20PPB OT4-28K |
| 6 | ICAL | 81 | 0915FA06 | TINS2 | HTINS@ 50PPB OT4-28G |
| 7 | ICAL | 82 | 0915FA07 | TINS2 | HTINS@ 200PPB OT4-28L |
| 8 | ICAL | 83 | 0915FA08 | TINS2 | HTINS@ 500PPB OT4-28M |
| 9 | ICAL | 84 | 0915FA09 | TINS2 | HTINS@ 1000PPB OT4-28N |
| 10 | ICV | 85 | 0915FA10 | TINS2 | HTINS @ 50PPB OT4-28O |

Last Modified: Wed Sep 15 14:40:00 2010

DATA ANALYSIS PARAMETERS

Method Name: J:\GC26\METHODS\091510-HTIN.M

Percent Report Settings

Sort By: Signal

Output Destination
Screen: No
Printer: Yes
File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
Screen: No
Printer: Yes
File: No

Generate Report During Run Method: No

Hexylated Butyltins CAL9536
Calibration Last Updated: Wed Sep 15 17:08:48 2010

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

1) Tri-n-propyltin ( )

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | -1 |
| 3 | | 5.000 | 78046 |
| 4 | | 20.000 | 383884 |
| 5 | | 50.000 | 946380 |
| 6 | | 200.000 | 4301194 |
| 7 | | 500.000 | 11267955 |
| 8 | | 1000.000 | 23903741 |

Curve Fit: Avg. RF

---

2) Tetrabutyltin ( )

Ret. Time 6.31 min., Extract & Integrate from 6.24 to 6.38 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | -1 |
| 3 | | 5.000 | 64258 |
| 4 | | 20.000 | 239662 |
| 5 | | 50.000 | 790107 |
| 6 | | 200.000 | 3556873 |
| 7 | | 500.000 | 9438651 |
| 8 | | 1000.000 | 19695165 |

Curve Fit: Avg. RF

---

3) Tri-n-butyltin ( )

Ret. Time 7.31 min., Extract & Integrate from 7.24 to 7.38 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.782 | -1 |
| 3 | | 4.455 | 103962 |
| 4 | | 17.820 | 327901 |
| 5 | | 44.550 | 1027898 |
| 6 | | 178.200 | 4446619 |
| 7 | | 445.500 | 11617992 |
| 8 | | 891.000 | 23692434 |

Curve Fit: Avg. RF

---

4) Di-n-butyltin ( )

Ret. Time 8.31 min., Extract & Integrate from 8.24 to 8.38 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| | | 1.533 | -1 |
| | | 3.833 | 86607 |
| | | 15.330 | 364121 |
| | | 38.325 | 1114009 |
| | | 153.300 | 4914713 |
| | | 383.250 | 13640769 |
| | | 766.500 | 27031584 |

---

5) n-Butyltin ( )
Ret. Time 9.27 min., Extract & Integrate from 9.20 to 9.34 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.246 | -1 |
| 3 | | 3.115 | 85611 |
| 4 | | 12.460 | 404195 |
| 5 | | 31.150 | 1114265 |
| 6 | | 124.600 | 4773482 |
| 7 | | 311.500 | 12619174 |
| 8 | | 623.000 | 25766747 |

Curve Fit: Avg. RF

---

6) Signal #2 ( )
Ret. Time 7.12 min., Extract & Integrate from 7.05 to 7.19 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | not used for this compound | |
| 3 | | not used for this compound | |
| 4 | | not used for this compound | |
| 5 | | not used for this compound | |
| 6 | | not used for this compound | |
| 7 | | not used for this compound | |
| 8 | | 1000.000 | -1 |

Curve Fit: Avg. RF

---

7) Tri-n-propyltin #2 ( )
Ret. Time 5.58 min., Extract & Integrate from 5.51 to 5.65 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 44141 |
| 3 | | 5.000 | 96252 |
| 4 | | 20.000 | 379182 |
| 5 | | 50.000 | 1070121 |
| 6 | | 200.000 | 4233773 |
| 7 | | 500.000 | 10604404 |
| 8 | | 1000.000 | 22286737 |

Curve Fit: Avg. RF

---

8) Tetrabutyltin #2 ( )
Ret. Time 5.78 min., Extract & Integrate from 5.71 to 5.85 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 2.000 | 45634 |
| 3 | | 5.000 | 100472 |
| 4 | | 20.000 | 281572 |
| 5 | | 50.000 | 825196 |
| 6 | | 200.000 | 3419386 |

| | | |
|---|---|---|
| 8 | 1000.000 | 18466701 |

Curve Fit: Avg. RF

---

9) Tri-n-butyltin #2 ( )

Ret. Time 6.72 min., Extract & Integrate from 6.65 to 6.79 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.782 | 46662 |
| 3 | | 4.455 | 114389 |
| 4 | | 17.820 | 386775 |
| 5 | | 44.550 | 1150196 |
| 6 | | 178.200 | 4458132 |
| 7 | | 445.500 | 11146649 |
| 8 | | 891.000 | 23212175 |

Curve Fit: Avg. RF

---

10) Di-n-butyltin #2 ( )

Ret. Time 7.67 min., Extract & Integrate from 7.60 to 7.74 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.533 | 45122 |
| 3 | | 3.833 | 117534 |
| 4 | | 15.330 | 434640 |
| 5 | | 38.325 | 1182208 |
| 6 | | 153.300 | 4907637 |
| 7 | | 383.250 | 12378890 |
| 8 | | 766.500 | 25758544 |

Curve Fit: Avg. RF

---

11) n-Butyltin #2 ( )

Ret. Time 8.62 min., Extract & Integrate from 8.55 to 8.69 min.

| Lvl | ID | Conc (ng/mL) | Response |
|---|---|---|---|
| 2 | | 1.246 | 49100 |
| 3 | | 3.115 | 119933 |
| 4 | | 12.460 | 408069 |
| 5 | | 31.150 | 1075883 |
| 6 | | 124.600 | 4522493 |
| 7 | | 311.500 | 11542375 |
| 8 | | 623.000 | 24442662 |

Curve Fit: Avg. RF

---

END OF DATA ANALYSIS PARAMETERS

Signal #1 : J:\GC26\DATA\091510B\0915FA02.D\FPD1A.CH Vial: 77
Signal #2 : J:\GC26\DATA\091510B\0915FA02.D\FPD2B.CH
Acq On : 15 Sep 2010 2:59 pm Operator: CCotnam
Sample : HEX Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:25:50 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

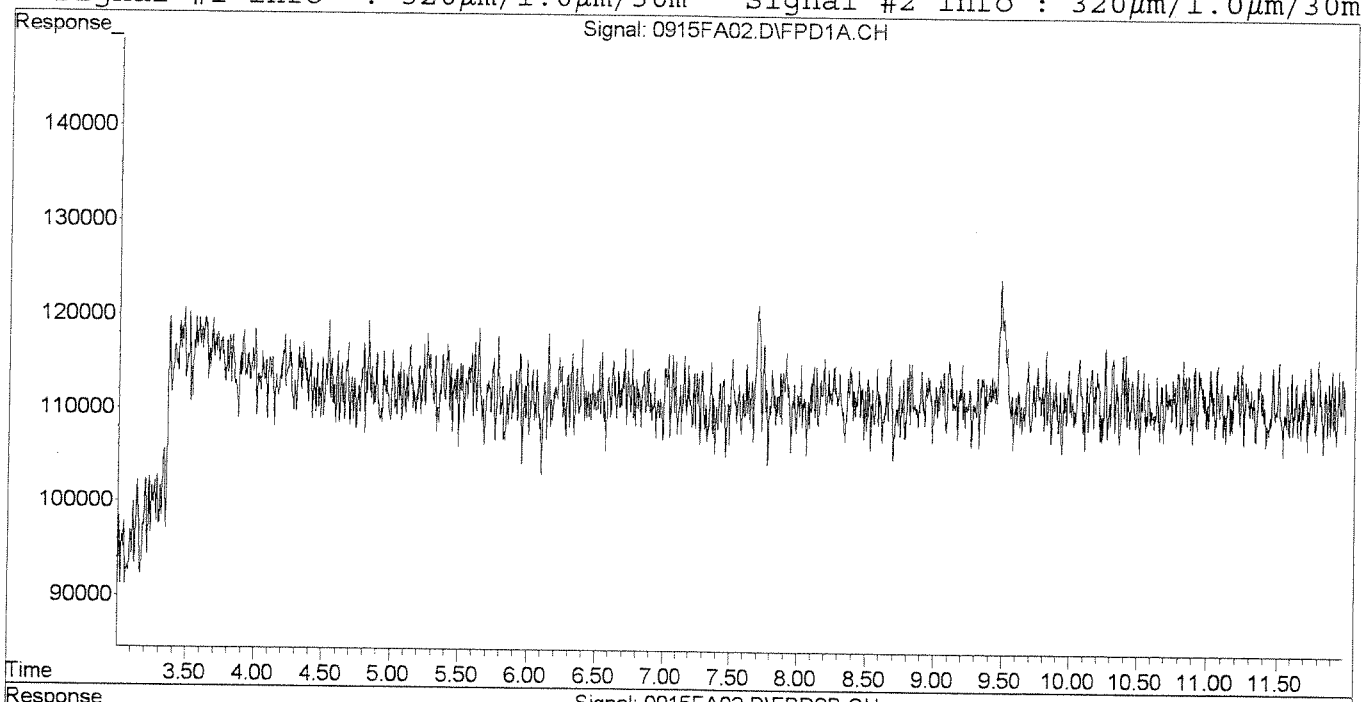
Target Compounds

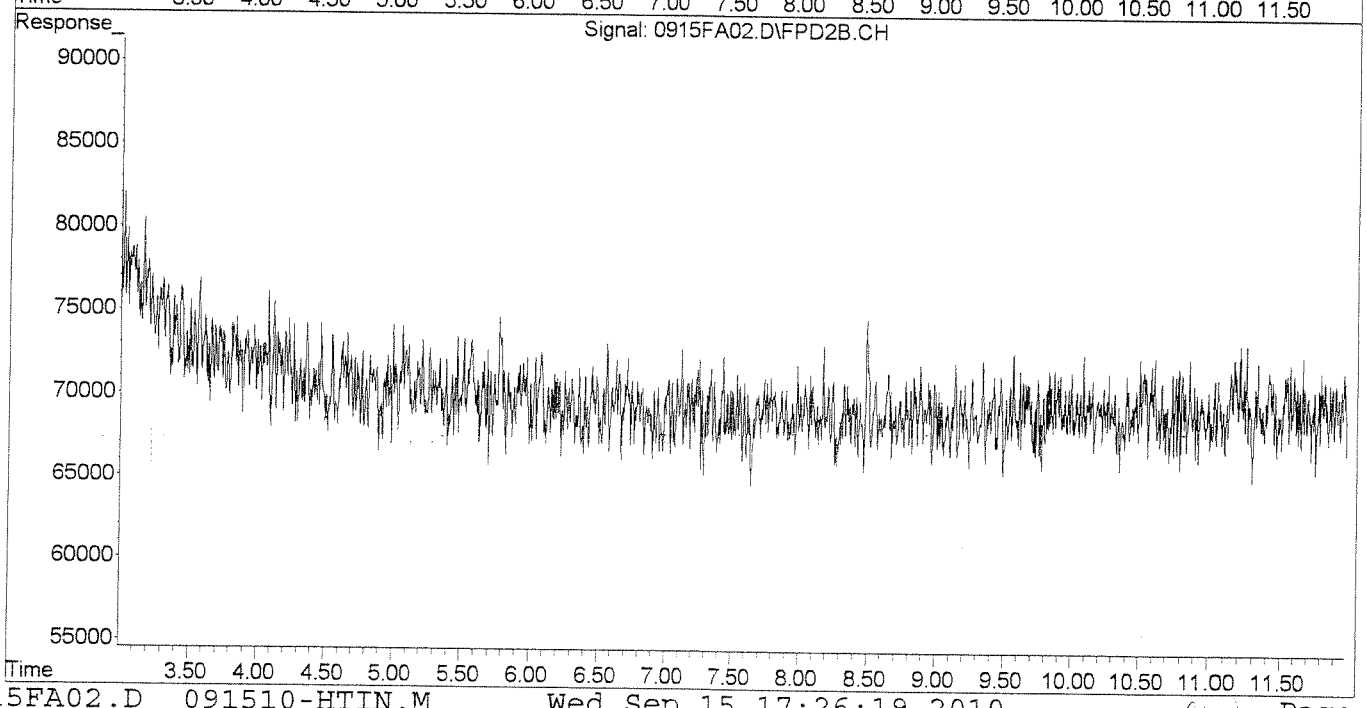
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA02.D\FPD1A.CH  Vial: 77
Signal #2 : J:\GC26\DATA\091510B\0915FA02.D\FPD2B.CH
Acq On : 15 Sep 2010 2:59 pm  Operator: CCotnam
Sample : HEX  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:26 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m






a91CW

Signal #1 : J:\GC26\DATA\091510B\0915FA03.D\FPD1A.CH  Vial: 78
Signal #2 : J:\GC26\DATA\091510B\0915FA03.D\FPD2B.CH
Acq On : 15 Sep 2010 3:16 pm  Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:09:52 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 11:55:31 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | | ng/mL |
|---|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | | |
| 1) | S | Tri-n-propyltin | 0.00 | 5.58 | 0 | 44141 | N.D. | d | 2.701 |
| | | Target Compounds | | | | | | | |
| 2) | | Tetrabutyltin | 0.00 | 5.77 | 0 | 45634 | N.D. | d | 3.140 |
| 3) | | Tri-n-butyltin | 0.00 | 6.73 | 0 | 46662 | N.D. | d | 2.205 |
| 4) | | Di-n-butyltin | 0.00 | 7.67 | 0 | 45122 | N.D. | d | 1.666 |
| 5) | | n-Butyltin | 0.00 | 8.61 | 0 | 49100 | N.D. | d | 1.615 |

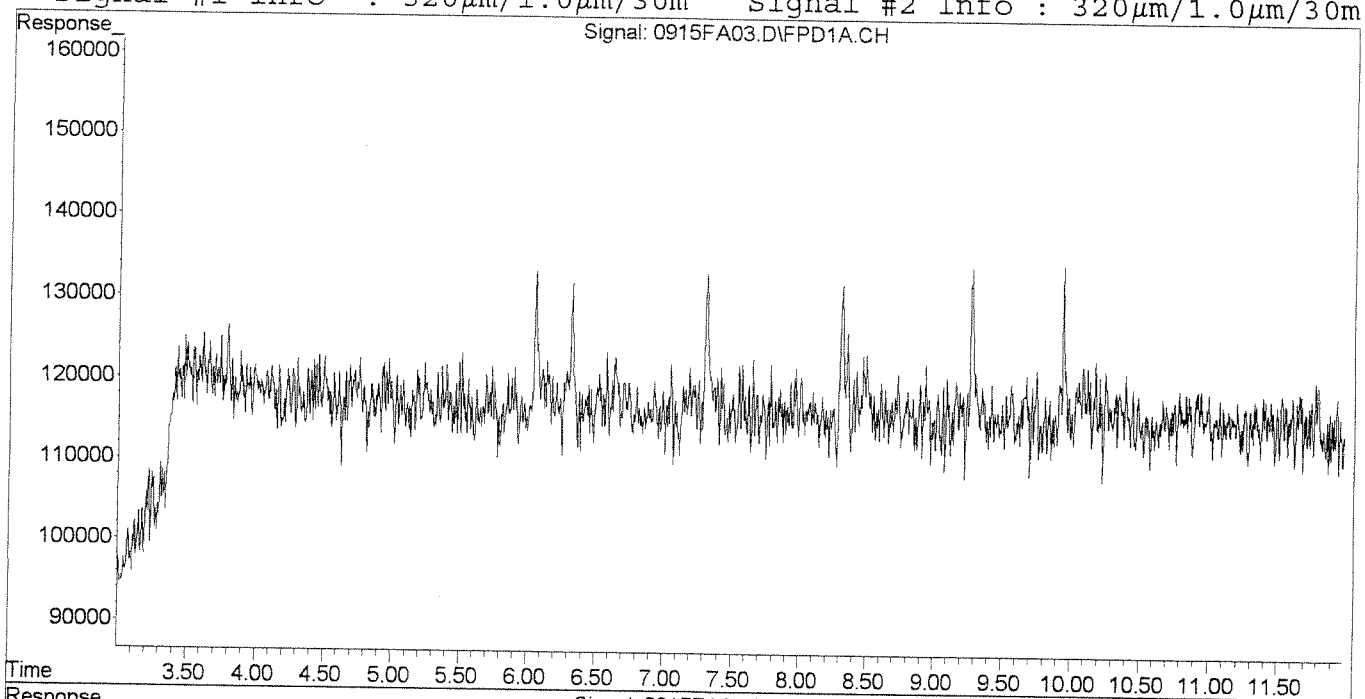
09/15/10

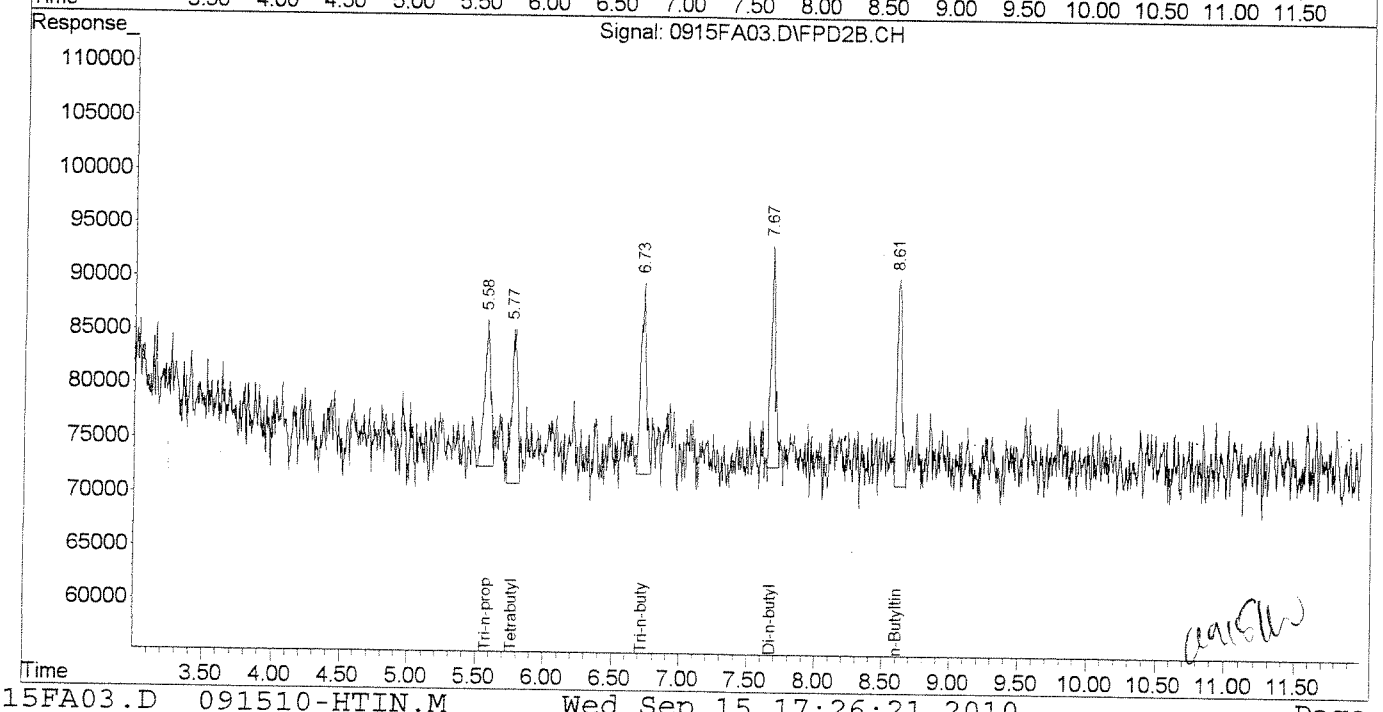
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA03.D\FPD1A.CH  Vial: 78
Signal #2 : J:\GC26\DATA\091510B\0915FA03.D\FPD2B.CH
Acq On : 15 Sep 2010 3:16 pm  Operator: CCotnam
Sample : HTINS@ 2PPB OT4-28I  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:10 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 11:55:31 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA04.D\FPD1A.CH  Vial: 79
Signal #2 : J:\GC26\DATA\091510B\0915FA04.D\FPD2B.CH
Acq On : 15 Sep 2010 3:32 pm  Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:11:07 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.57 | 78046 | 96252 | 4.968 | 5.890 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 64258 | 100472 | 4.541 | 6.914 # |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 103962 | 114389 | 5.453 | 5.406 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 86607 | 117534 | 3.312 | 4.339 # |
| 5) | n-Butyltin | 9.27 | 8.62 | 85611 | 119933 | 8.435 | 3.945 # |

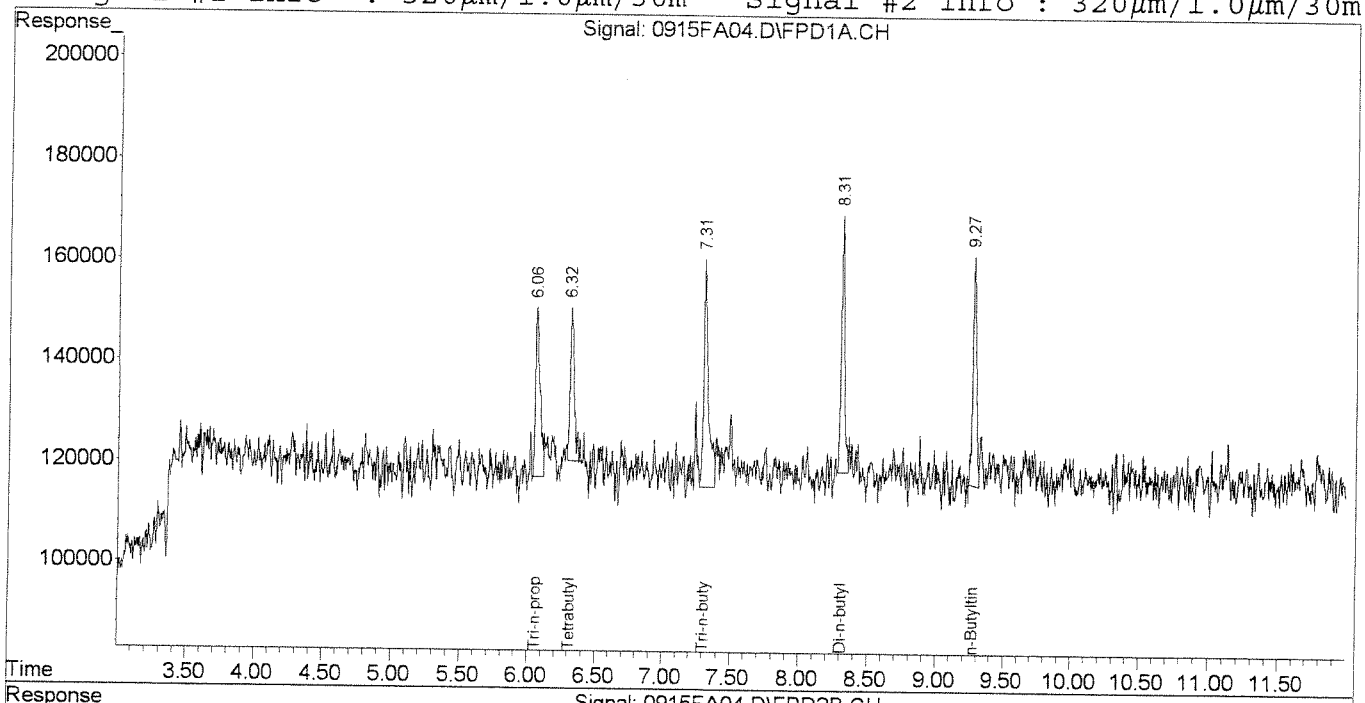
a915 lw

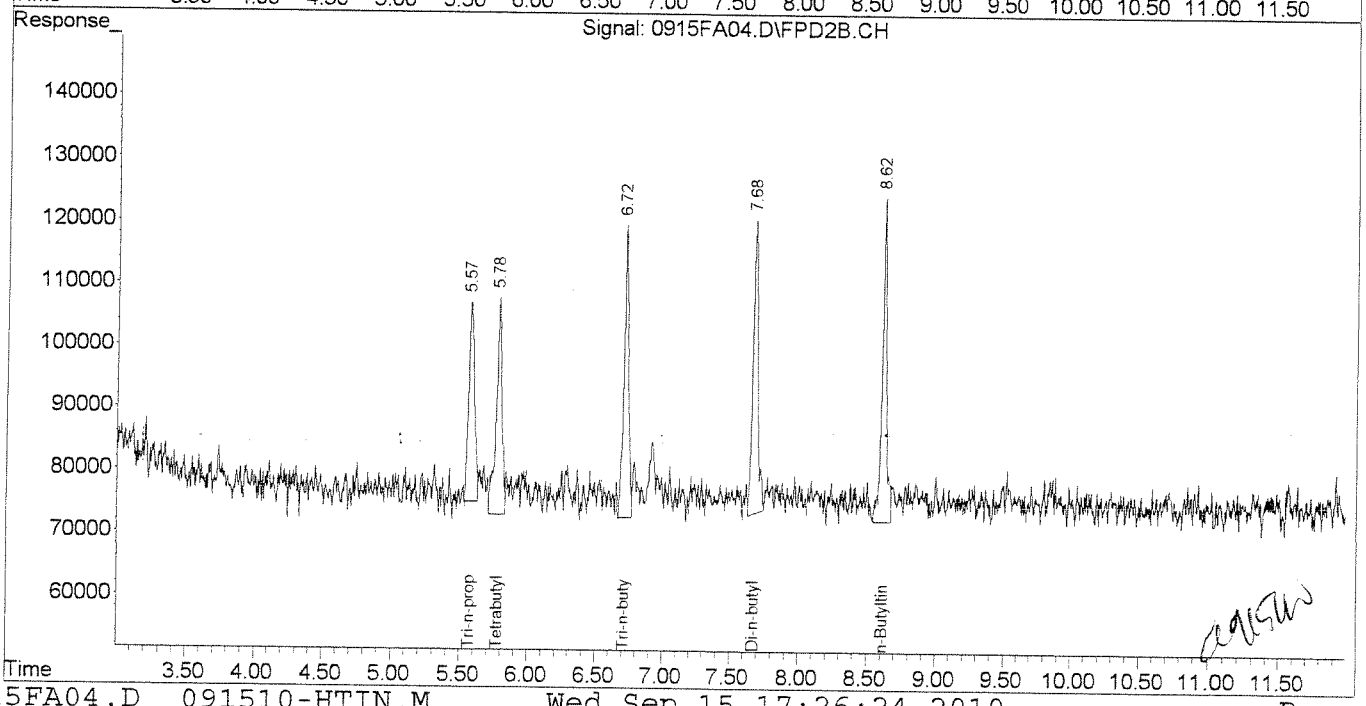
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA04.D\FPD1A.CH  Vial: 79
Signal #2 : J:\GC26\DATA\091510B\0915FA04.D\FPD2B.CH
Acq On : 15 Sep 2010 3:32 pm  Operator: CCotnam
Sample : HTINS@ 5PPB OT4-28J  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:11 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA05.D\FPD1A.CH  Vial: 80
Signal #2 : J:\GC26\DATA\091510B\0915FA05.D\FPD2B.CH
Acq On : 15 Sep 2010 3:49 pm  Operator: CCotnam
Sample : HTINS@ 20PPB OT4-28K  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:11:08 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

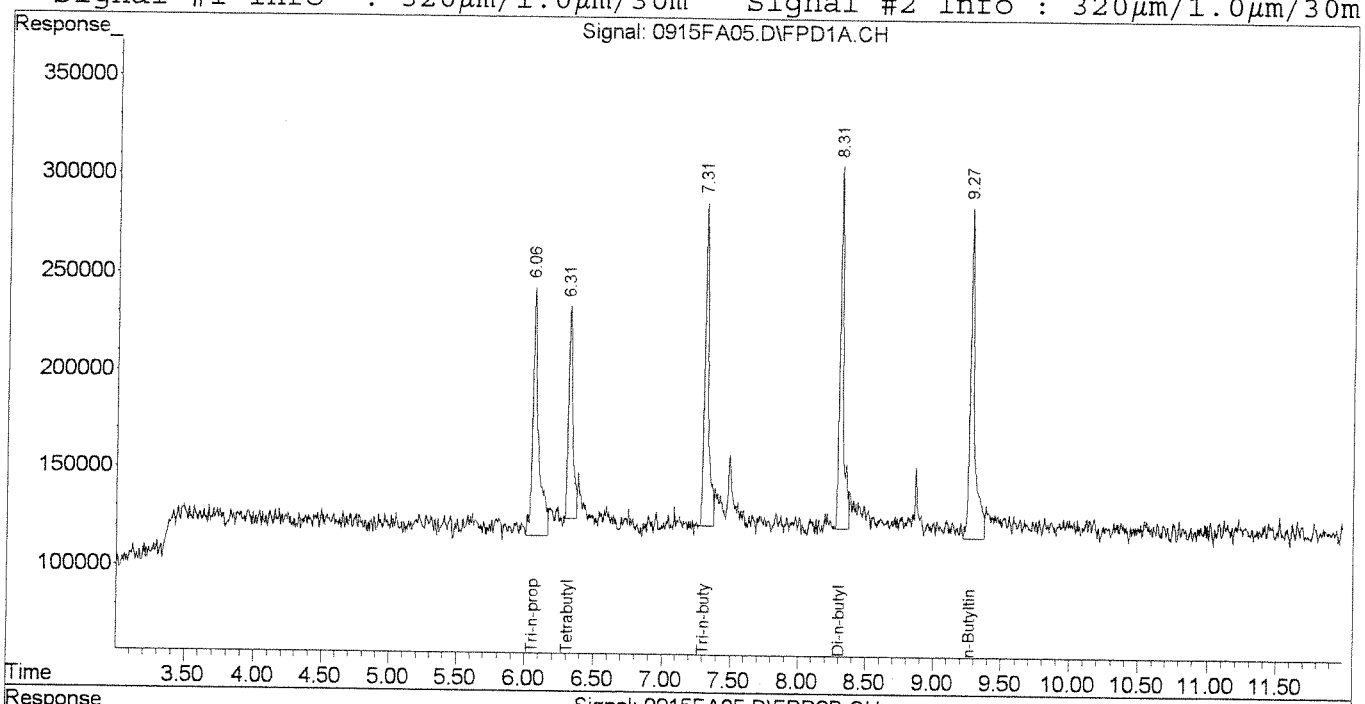
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 383884 | 379182 | 24.437 | 23.202 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.31 | 5.78 | 239662 | 281572 | 16.936 | 19.376 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 327901 | 386775 | 17.198 | 18.279 |
| 4) | Di-n-butyltin | 8.31 | 7.67 | 364121 | 434640 | 13.924 | 16.046 |
| 5) | n-Butyltin | 9.27 | 8.62 | 404195 | 408069 | 18.484 | 13.424 # |

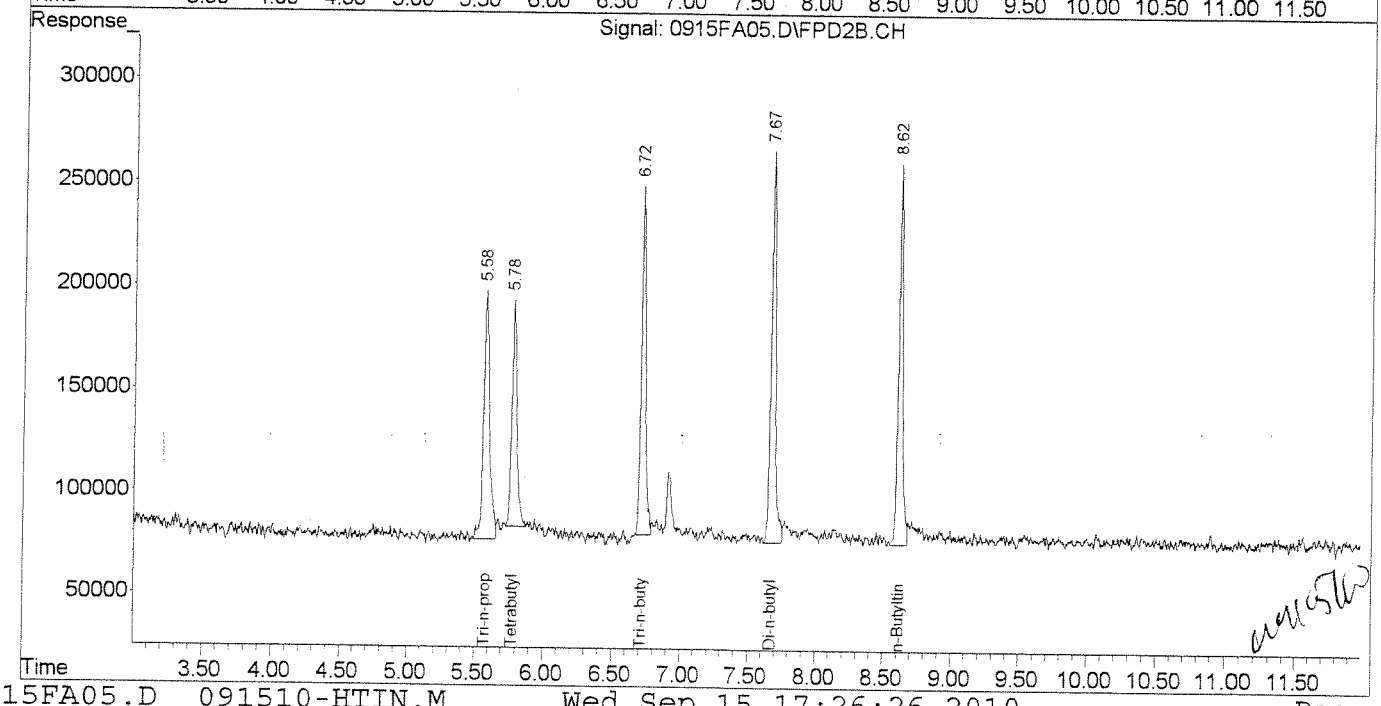
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA05.D\FPD1A.CH  Vial: 80
Signal #2 : J:\GC26\DATA\091510B\0915FA05.D\FPD2B.CH
Acq On : 15 Sep 2010 3:49 pm  Operator: CCotnam
Sample : HTINS@ 20PPB OT4-28K  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:11 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA06.D\FPD1A.CH Vial: 81
Signal #2 : J:\GC26\DATA\091510B\0915FA06.D\FPD2B.CH
Acq On : 15 Sep 2010 4:05 pm Operator: CCotnam
Sample : HTINS@ 50PPB OT4-28G Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:24:23 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 946380 | 1070121 | 60.245 | 65.481 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 790107 | 825196 | 55.833 | 56.784 |
| 3) | Tri-n-butyltin | 7.32 | 6.72 | 1027898 | 1150196 | 53.912 | 54.358 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 1114009 | 1182208 | 42.601 | 43.645 |
| 5) | n-Butyltin | 9.27 | 8.62 | 1114265 | 1075883 | 40.709 | 35.393 |

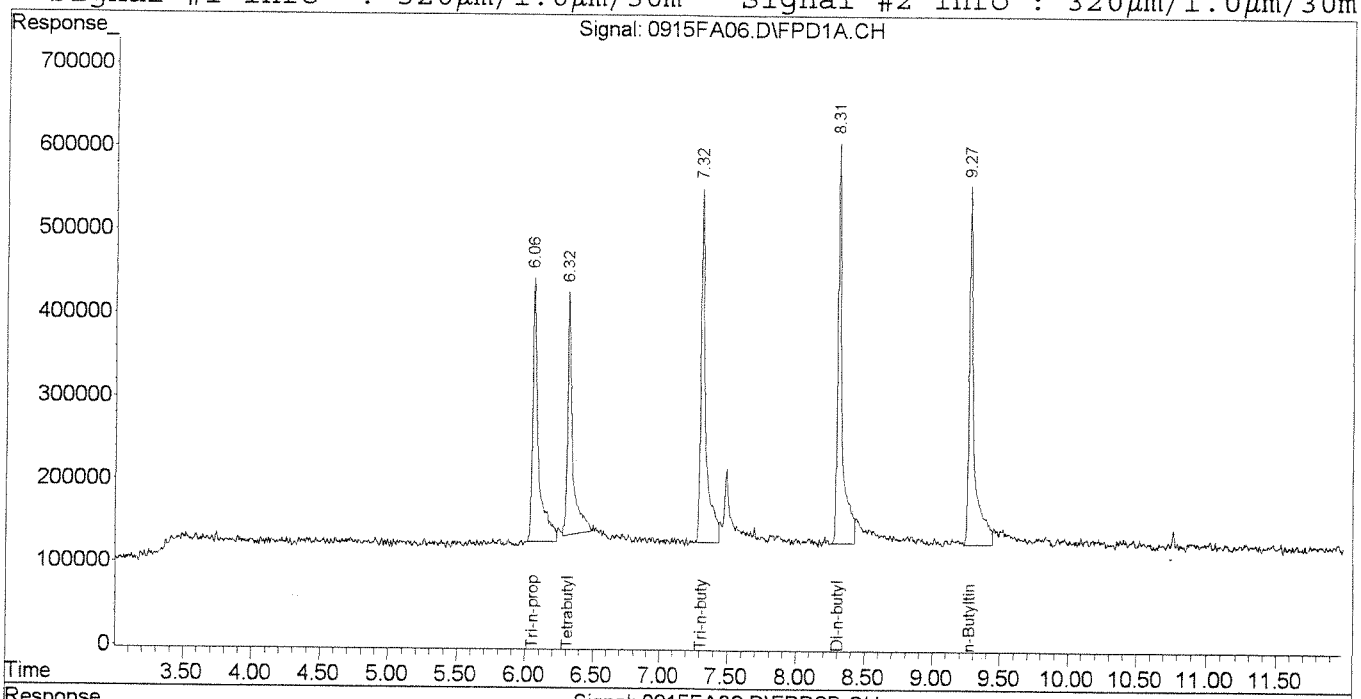
091510

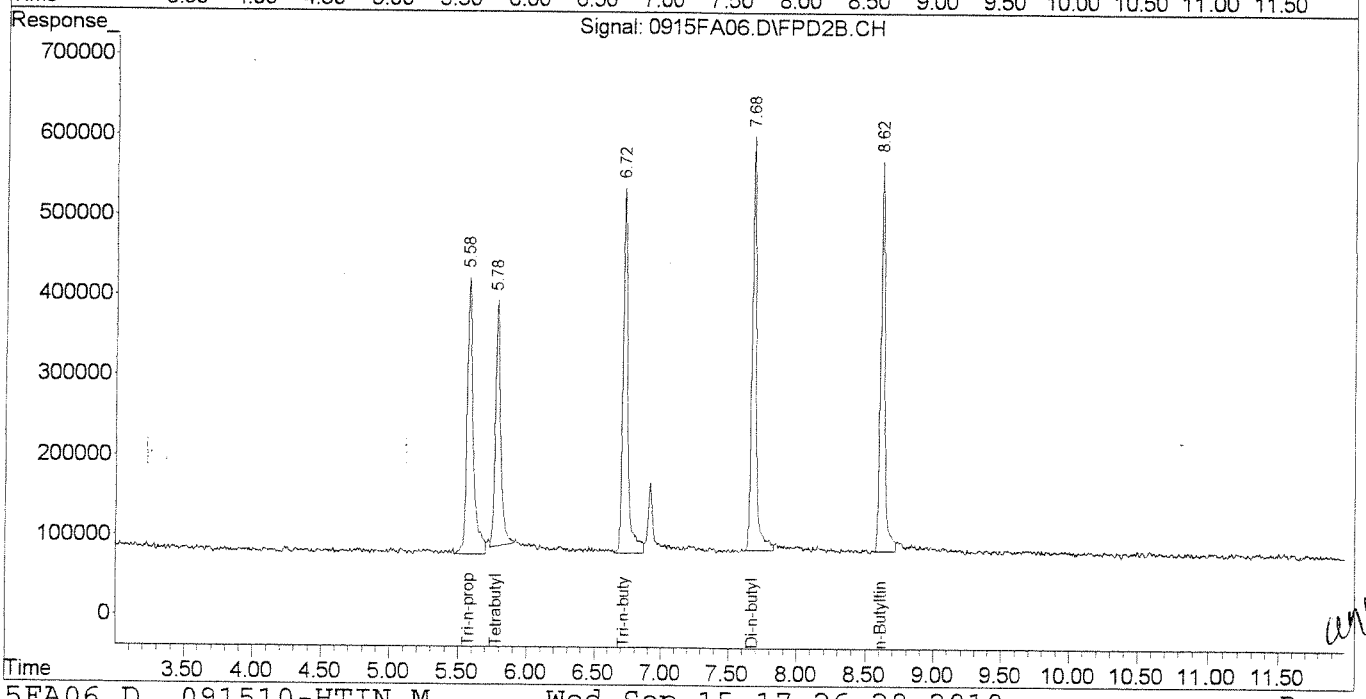
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0915FA06.D 091510-HTIN.M Wed Sep 15 17:26:28 2010 Page 1

Signal #1 : J:\GC26\DATA\091510B\0915FA06.D\FPD1A.CH  Vial: 81
Signal #2 : J:\GC26\DATA\091510B\0915FA06.D\FPD2B.CH
Acq On : 15 Sep 2010 4:05 pm  Operator: CCotnam
Sample : HTINS@ 50PPB OT4-28G  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:24 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA07.D\FPD1A.CH  Vial: 82
Signal #2 : J:\GC26\DATA\091510B\0915FA07.D\FPD2B.CH
Acq On : 15 Sep 2010 4:21 pm  Operator: CCotnam
Sample : HTINS@ 200PPB OT4-28L  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:35:12 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

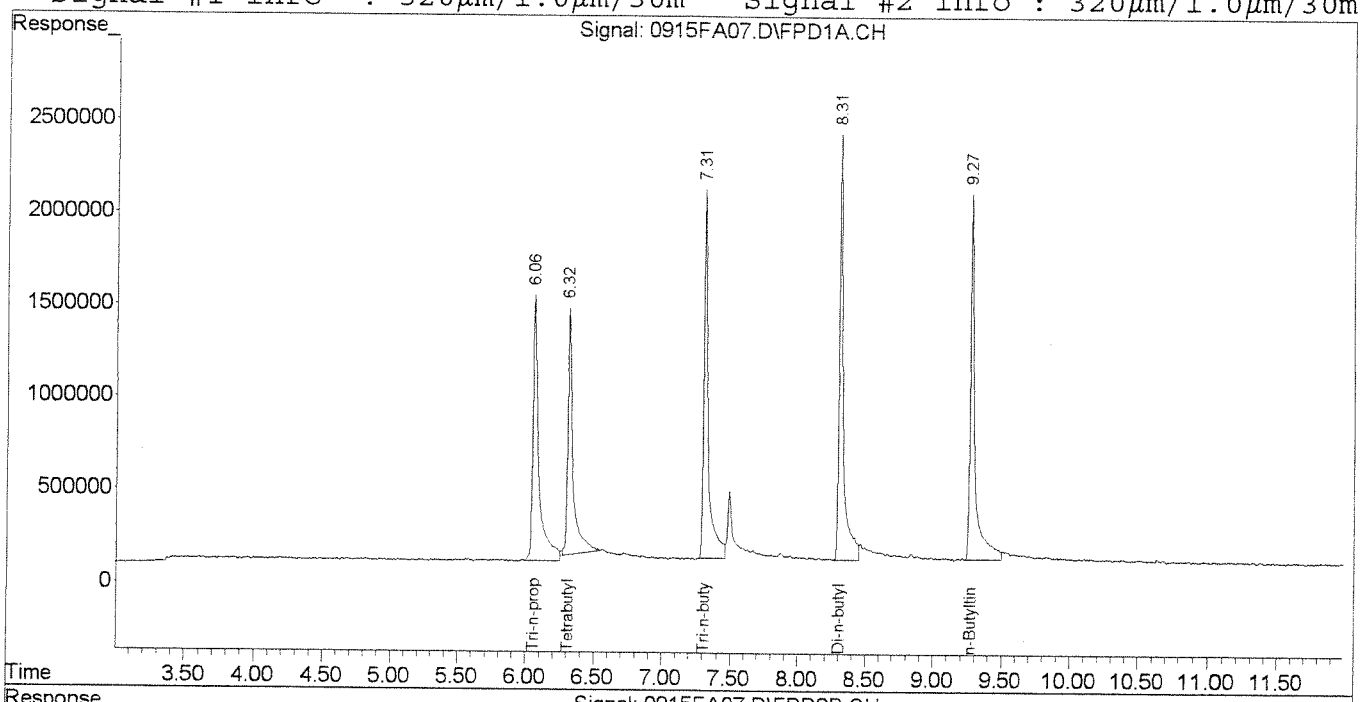
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.57 | 4301194 | 4233773 | 273.807 | 259.064 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 3556873 | 3419386 | 251.348 | 235.298 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 4446619 | 4458132 | 233.219 | 210.691 |
| 4) | Di-n-butyltin | 8.31 | 7.67 | 4914713 | 4907637 | 187.944 | 181.183 |
| 5) | n-Butyltin | 9.27 | 8.61 | 4773482 | 4522493 | 151.674 | 148.776 |

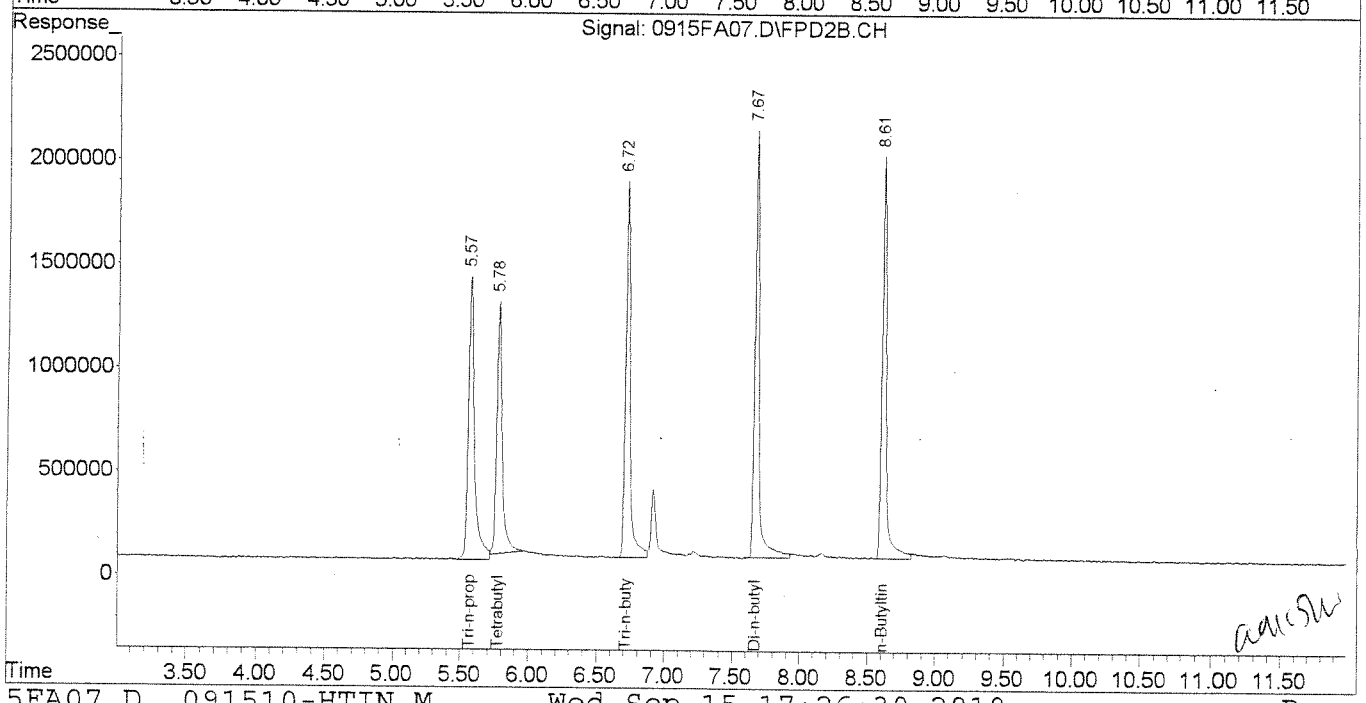
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA07.D\FPD1A.CH  Vial: 82
Signal #2 : J:\GC26\DATA\091510B\0915FA07.D\FPD2B.CH
Acq On : 15 Sep 2010 4:21 pm  Operator: CCotnam
Sample : HTINS@ 200PPB OT4-28L  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 16:35 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA08.D\FPD1A.CH  Vial: 83
Signal #2 : J:\GC26\DATA\091510B\0915FA08.D\FPD2B.CH
Acq On : 15 Sep 2010 4:38 pm  Operator: CCotnam
Sample : HTINS@ 500PPB OT4-28M  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:06:18 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

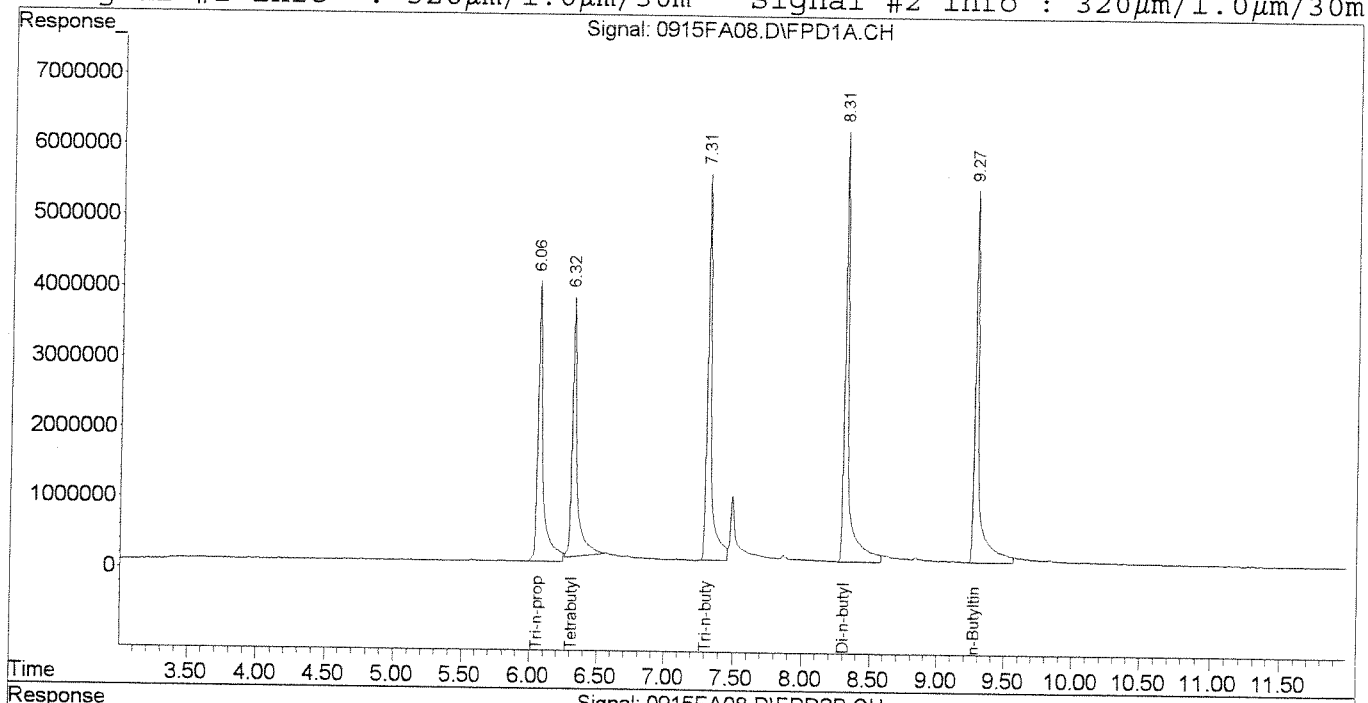
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 11267955 | 10604404 | 717.300 | 648.882 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 9438651 | 8832071 | 666.986 | 607.761 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 11617992 | 11146649 | 609.346 | 526.790 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 13640769 | 12378890 | 521.637 | 457.011 |
| 5) | n-Butyltin | 9.27 | 8.62 | 12619174 | 11542375 | 372.480 | 379.708 |

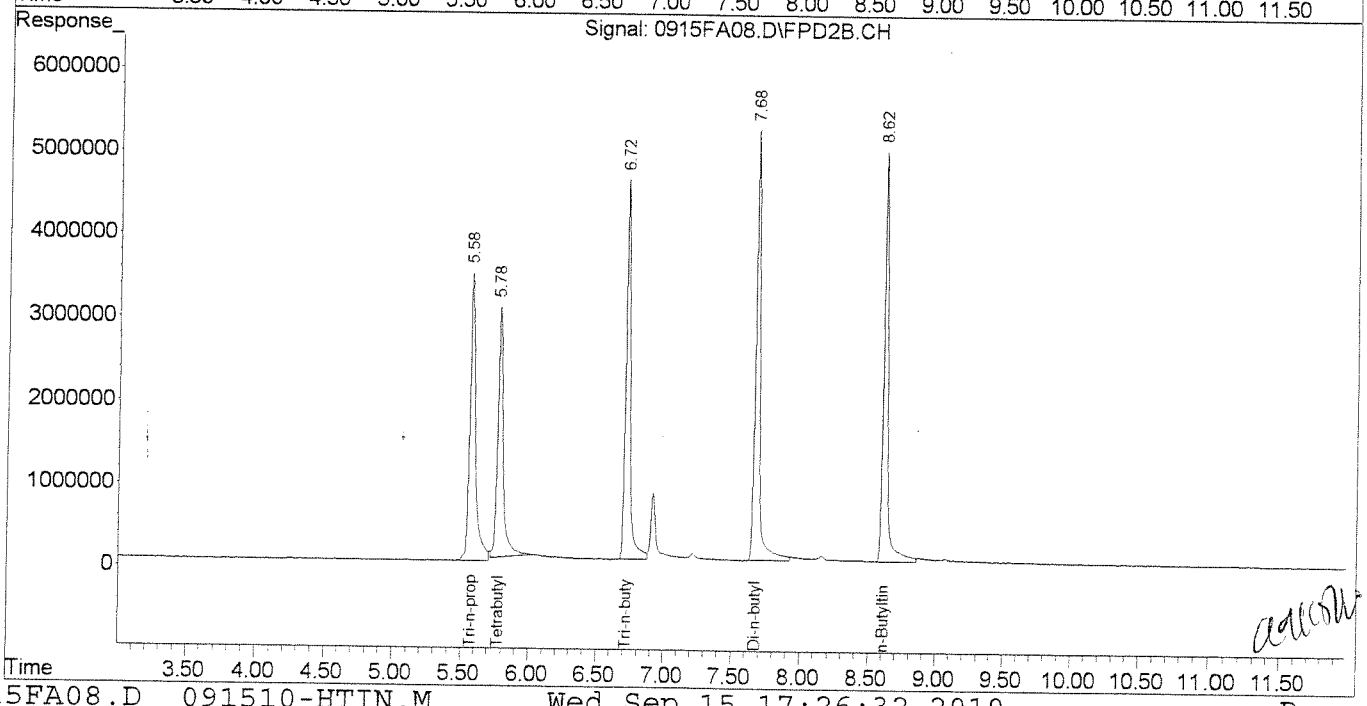
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0915FA08.D 091510-HTIN.M  Wed Sep 15 17:26:32 2010  Page 1

Signal #1 : J:\GC26\DATA\091510B\0915FA08.D\FPD1A.CH  Vial: 83
Signal #2 : J:\GC26\DATA\091510B\0915FA08.D\FPD2B.CH
Acq On : 15 Sep 2010 4:38 pm  Operator: CCotnam
Sample : HTINS@ 500PPB OT4-28M  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:06 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA09.D\FPD1A.CH  Vial: 84
Signal #2 : J:\GC26\DATA\091510B\0915FA09.D\FPD2B.CH
Acq On : 15 Sep 2010 4:54 pm  Operator: CCotnam
Sample : HTINS@ 1000PPB OT4-28N  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:07:22 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

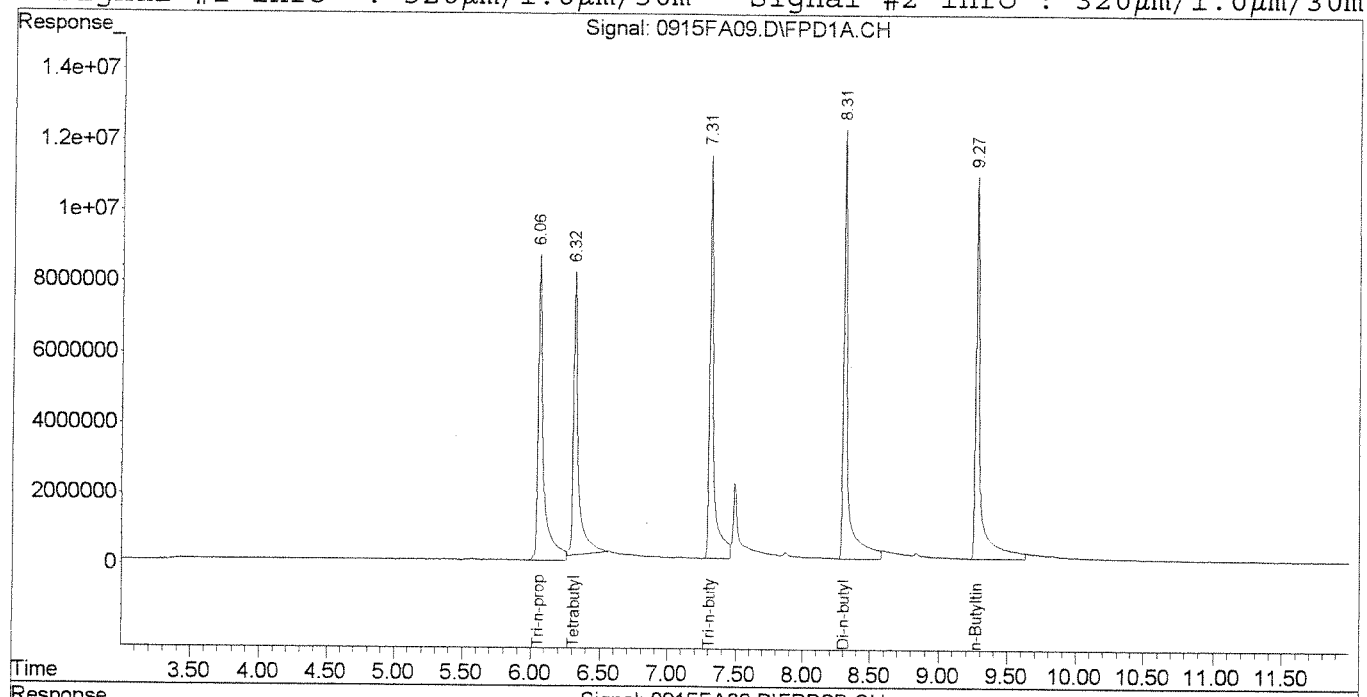
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 23903741 | 22286737 | 1521.673 | 1363.721 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 19695165 | 18466701 | 1391.766 | 1270.748 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 23692434 | 23212175 | 1242.633 | 1097.005 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 27031584 | 25758544 | 1033.716 | 950.968 |
| 5) | n-Butyltin | 9.27 | 8.62 | 25766747 | 24442662 | 702.993 | 804.086 |

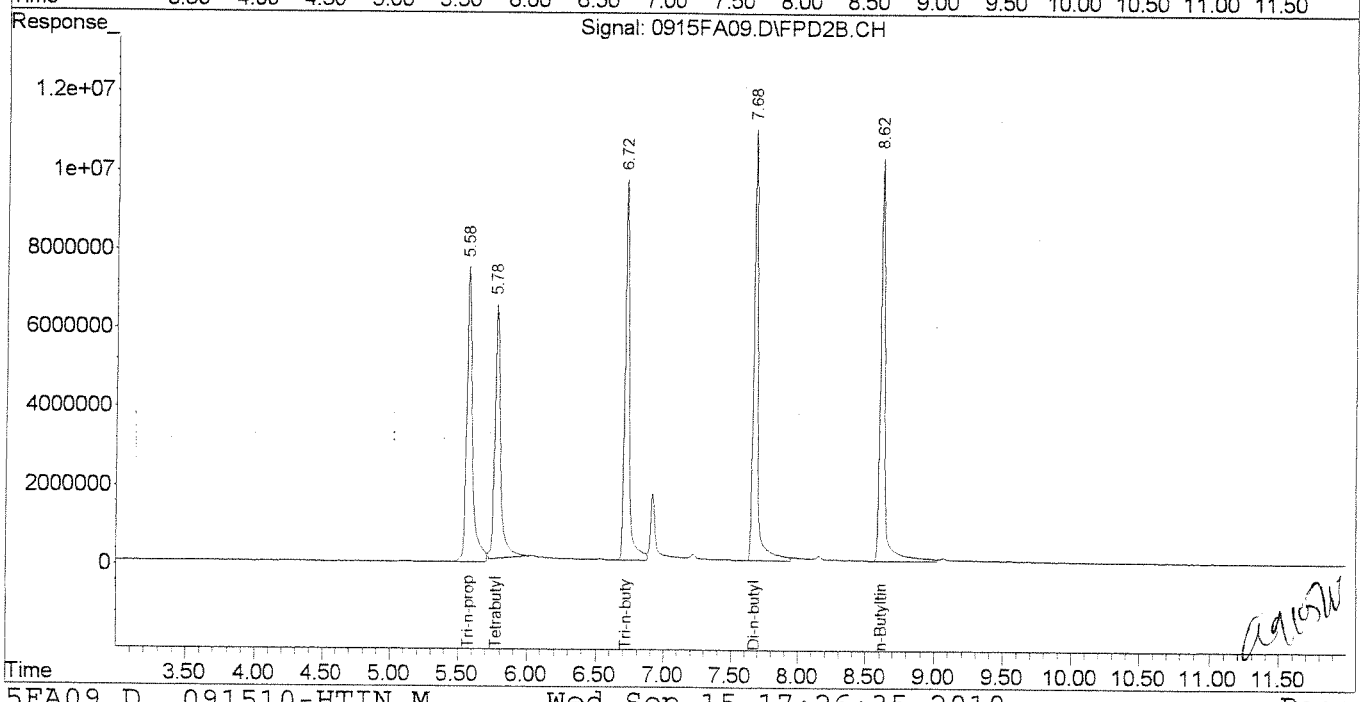
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0915FA09.D 091510-HTIN.M  Wed Sep 15 17:26:34 2010  Page 1

Signal #1 : J:\GC26\DATA\091510B\0915FA09.D\FPD1A.CH  Vial: 84
Signal #2 : J:\GC26\DATA\091510B\0915FA09.D\FPD2B.CH
Acq On : 15 Sep 2010 4:54 pm  Operator: CCotnam
Sample : HTINS@ 1000PPB OT4-28N  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:07 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 16:10:54 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



Signal #1 : J:\GC26\DATA\091510B\0915FA10.D\FPD1A.CH  Vial: 85
Signal #2 : J:\GC26\DATA\091510B\0915FA10.D\FPD2B.CH
Acq On : 15 Sep 2010 5:11 pm  Operator: CCotnam
Sample : HTINS @ 50PPB OT4-280  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:25:17 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m

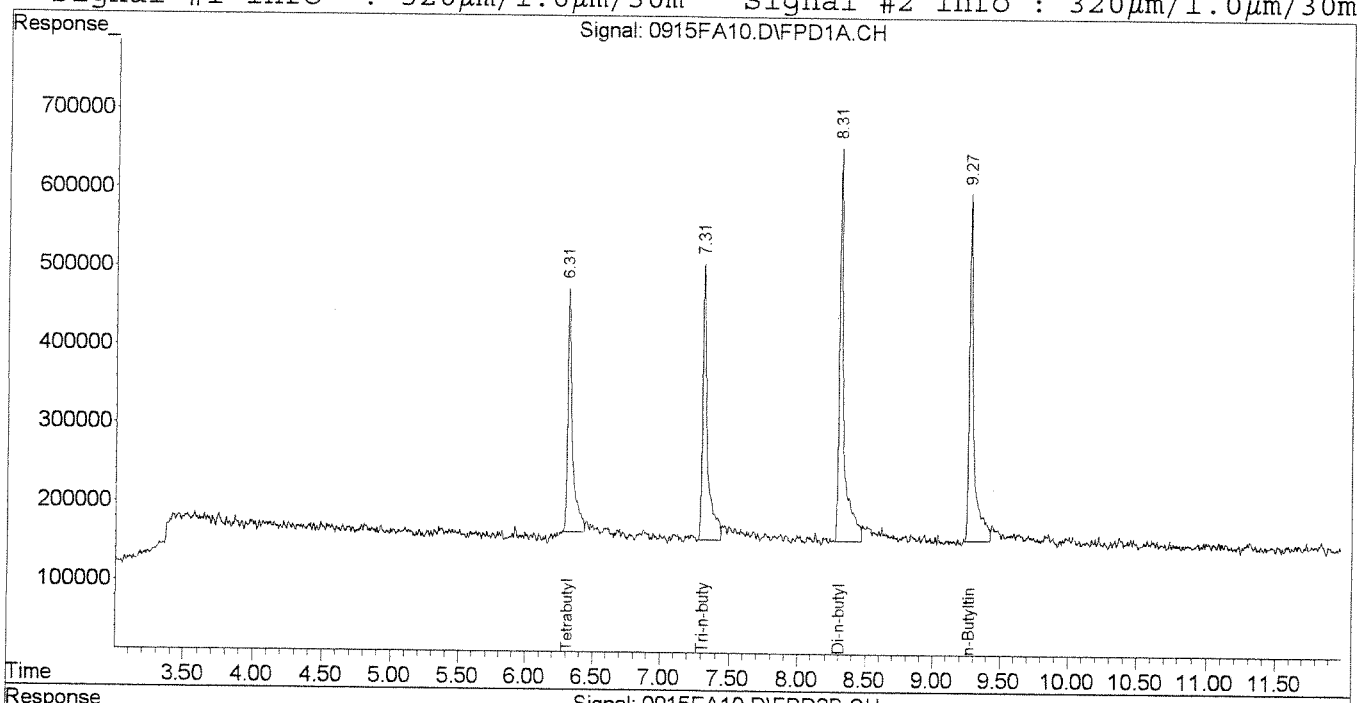
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.31 | 5.78 | 787758 | 883547 | 48.730 | 48.806 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 834989 | 885853 | 35.174 | 35.338 |
| 4) | Di-n-butyltin | 8.31 | 7.67 | 1170778 | 1158736 | 39.390 | 37.341 |
| 5) | n-Butyltin | 9.27 | 8.61 | 1037265 | 1089300 | 28.830 | 29.580 |

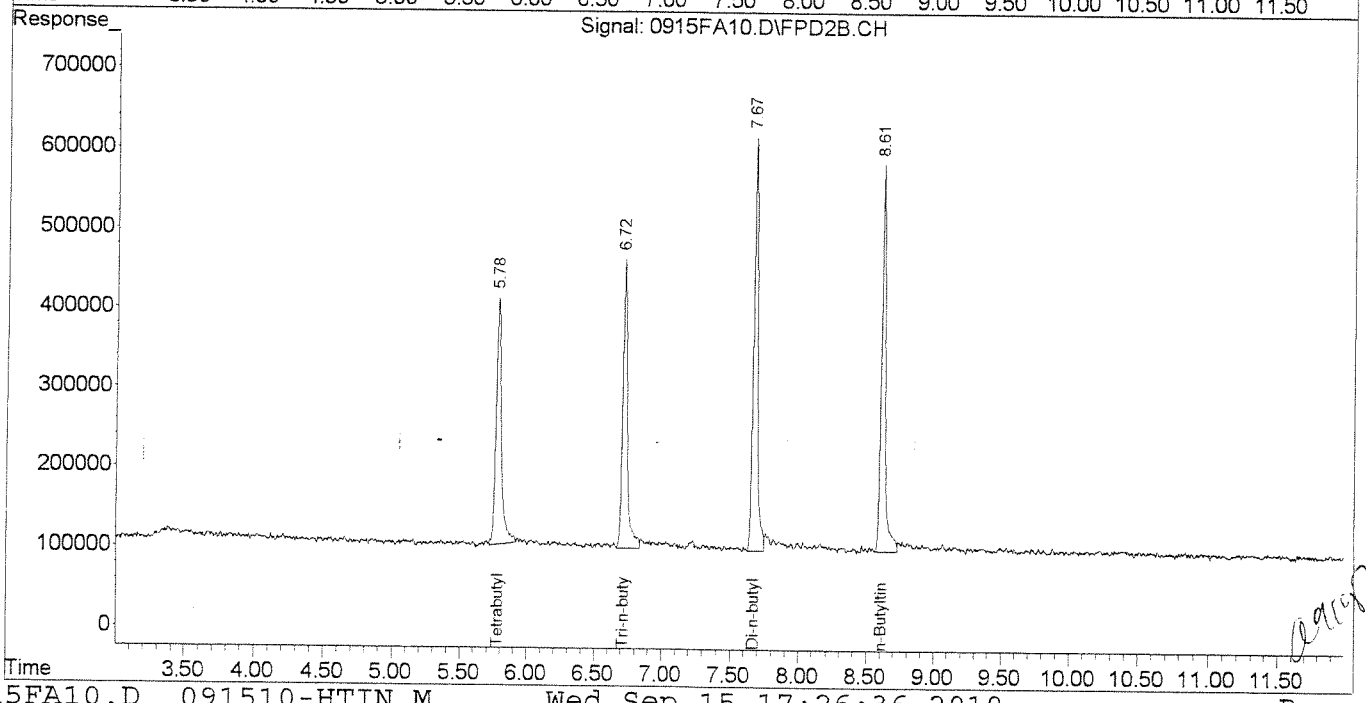
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510B\0915FA10.D\FPD1A.CH  Vial: 85
Signal #2 : J:\GC26\DATA\091510B\0915FA10.D\FPD2B.CH
Acq On : 15 Sep 2010 5:11 pm  Operator: CCotnam
Sample : HTINS @ 50PPB OT4-280  Inst : GC26
Misc : SEMIVOA GC\W0800304\1-IB.H  Multiplr: 1.00
IntFile Signal #1: RTEINT.P  IntFile Signal #2: RTEINT2.P
Quant Time: Sep 15 17:25 2010  Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1  Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m  Signal #2 Info : 320µm/1.0µm/30m



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/08/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F003.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 42 | 20600 | 17100 | -17 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 38 | 29300 | 24900 | -15 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 30 | 38700 | 30400 | -21 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 26 | 44300 | 37200 | -16 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 43 | 24600 | 20900 | -15 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/08/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F003.D\0908F003C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 45 | 18200 | 16400 | -10 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 39 | 26300 | 23200 | -12 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 33900 | 30600 | -10 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 27 | 38500 | 33900 | -12 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 49 | 21300 | 20700 | -3 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F003.D
**Lab ID:** KWG1009479-2
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/08/2010 23:02
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: AC 9/12/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F003.D\0908F003C.D
**Lab ID:** KWG1009479-2
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/08/2010 23:02
**Date Quantitated:** 09/09/2010 07:09
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: MG 9/10

Secondary Review: AK 9/10/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Bottle ID: | | Tier: | | Matrix: | MISC |
| Prod Code: | Butyltins BUTYL | Collect Date: | | Receive Date: | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| Analysis Lot: | KWG1009479 | Prep Lot: | | Report Group: | |
| Analysis Method: | Krone | Prep Method: | | | |
| Prep Ref: | | Prep Date: | | | |

| | | | |
|---|---|---|---|
| Quant Method: | J:\GC26\METHODS\083010-HTIN. | Calibration ID: | CAL9814 |
| Title: | | | |
| MB Ref: | | Method ID: | MJ133 |
| | | Quant based on Method | |

| | | | | | |
|---|---|---|---|---|---|
| Data File #1: | J:\GC26\DATA\090810A\0908F003.D | | | Instrument: | GC26 |
| Data File #2: | J:\GC26\DATA\090810A\0908F003.D\0908F003c.d | | | Vial: | 6 |
| Acqu Date: | 09/08/2010 23:02 | Quant Date: | 09/09/2010 07:09 | Dilution: | 1.0 |
| Run Type: | CCV | | | Soln Conc. Units: | ng/mL |
| Lab ID: | KWG1009479-2 | | | | |
| Signal #1: | RTX-1 | Signal #2: | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.12 | 5.55 | 1046775 | 1034273 | 42.61 | 48.51 | | | NA |
| | | | %Recovery = | | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

Final Conc. Units:

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.39 | 5.76 | 853562 | 821175 | 41.51 | 45.01 | | | |
| Tri-n-butyltin Cation | 7.40 | 6.70 | 1108953 | 1032840 | 37.89 | 39.31 | | | |
| Di-n-butyltin Cation | 8.40 | 7.66 | 1166834 | 1172337 | 30.13 | 34.56 | | | |
| n-Butyltin Cation | 9.38 | 8.60 | 1159595 | 1057310 | 26.16 | 27.47 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

# *Calibration Verification Report*

**Calibration ID:** CAL9814
**Method ID:** MJ133

**DataFile:** J:\GC26\DATA\090810A\0908F003.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.5E+4 | 2.1E+4 | -14.8 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 2.1E+4 | 1.7E+4 | -17.0 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.9E+4 | 2.5E+4 | -15.0 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.9E+4 | 3.0E+4 | -21.4 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 4.4E+4 | 3.7E+4 | -16.0 | | | |

# *Calibration Verification Report*

**Calibration ID:** CAL9814
**Method ID:** MJ133
**DataFile:** J:\GC26\DATA\090810A\0908F003.D\0908F003C.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.1E+4 | 2.1E+4 | -3.0 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.8E+4 | 1.6E+4 | -10.0 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.6E+4 | 2.3E+4 | -11.8 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.4E+4 | 3.1E+4 | -9.8 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.8E+4 | 3.4E+4 | -11.8 | | | |

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F003.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F003.D\FPD2B.CH
Acq On : 08 Sep 2010 11:02 pm Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-4 Inst : GC26
Misc : SEMIVOA GC\W1009479\4-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:19 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.12 | 5.55 | 1046775 | 1034273 | 42.613 | 48.511 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.39 | 5.76 | 853562 | 821175 | 41.513 | 45.013 |
| 3) | Tri-n-butyltin | 7.40 | 6.70 | 1108953 | 1032840 | 37.890 | 39.305 |
| 4) | Di-n-butyltin | 8.40 | 7.66 | 1166834 | 1172337 | 30.129 | 34.561 |
| 5) | n-Butyltin | 9.38 | 8.60 | 1159595 | 1057310 | 26.158 | 27.467 |

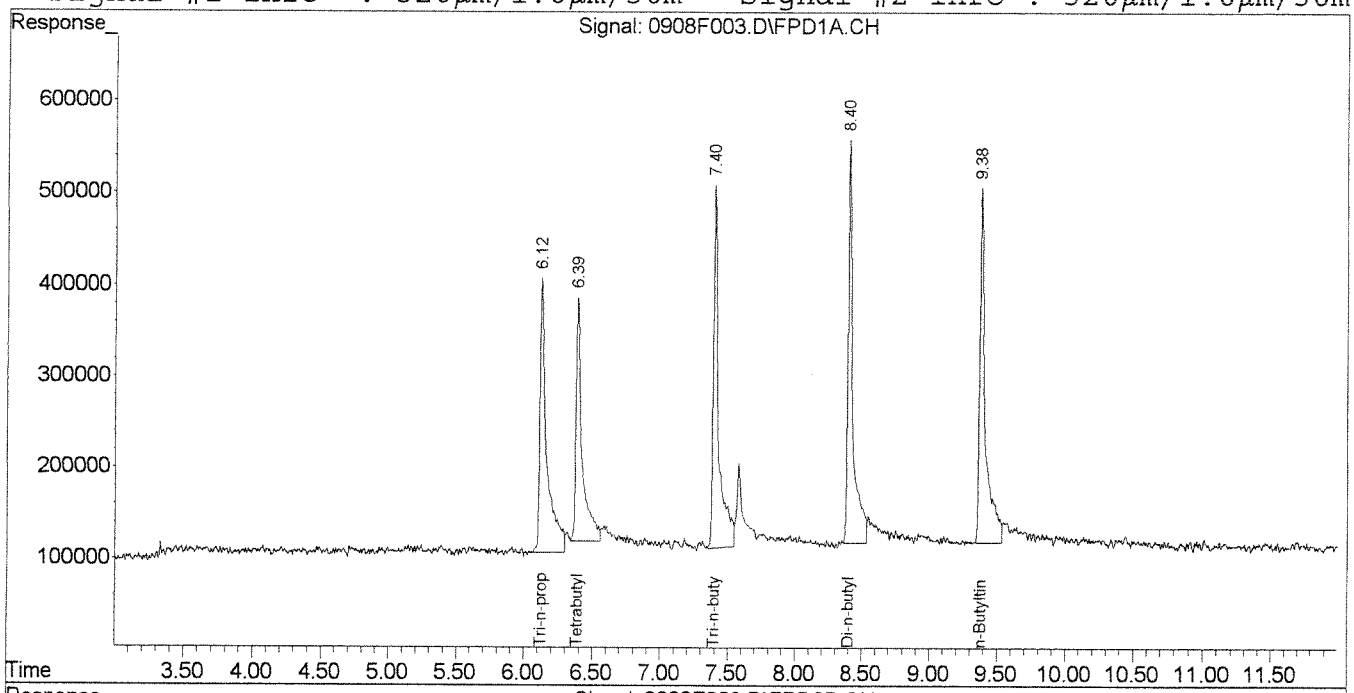
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

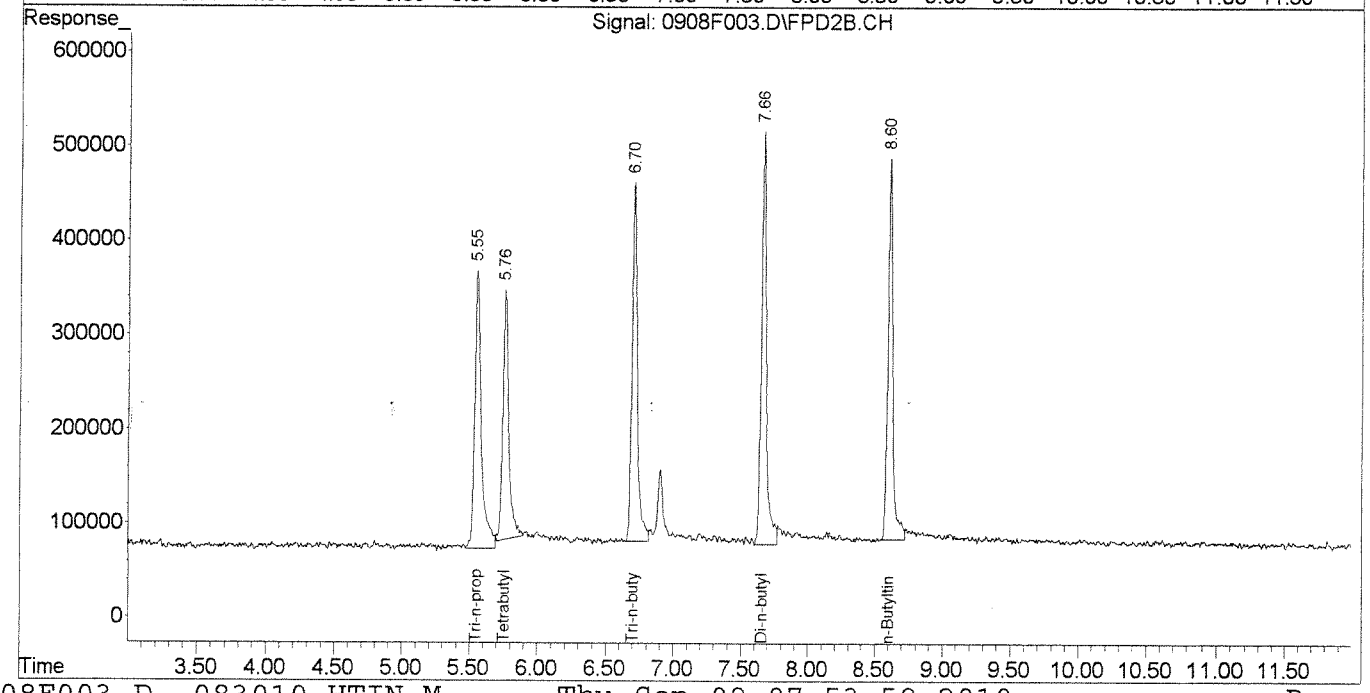
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F003.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F003.D\FPD2B.CH
Acq On : 08 Sep 2010 11:02 pm Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-4 Inst : GC26
Misc : SEMIVOA GC\W1009479\4-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Windward Environmental, LLC
**Project:** Passaic RI/FS Sediment/Task 18.8.1

**Service Request:** K1008857
**Date Analyzed:** 09/09/2010

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

**Calibration Type:** External Standard
**Analysis Method:** Krone

**Calibration Date:** 08/30/2010
**Calibration ID:** CAL9814
**Analysis Lot:** KWG1009479
**Units:** ng/mL

**File ID:** J:\GC26\DATA\090810A\0908F020.D

**Column ID:** RTX-1

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 38 | 20600 | 15700 | -24 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 37 | 29300 | 24200 | -17 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 29 | 38700 | 29700 | -23 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 24 | 44300 | 34900 | -21 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 38 | 24600 | 18700 | -24 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/09/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 08/30/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9814 |
| | | **Analysis Lot:** | KWG1009479 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\090810A\0908F020.D\0908F020C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 45 | 18200 | 16600 | -9 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 42 | 26300 | 24800 | -6 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 33900 | 30700 | -10 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 29 | 38500 | 35400 | -8 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 46 | 21300 | 19400 | -9 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F020.D
**Lab ID:** KWG1009479-4
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/09/2010 03:40
**Date Quantitated:** 09/09/2010 07:11
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible] 9/9/10

Secondary Review: [illegible] 9/10/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F020.D\0908F020C.D
**Lab ID:** KWG1009479-4
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/09/2010 03:40
**Date Quantitated:** 09/09/2010 07:11
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: MJ 9/10/10

Secondary Review: AC 9/10/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Bottle ID: | | Tier: | | Matrix: | MISC |
| Prod Code: | Butyltins BUTYL | Collect Date: | | Receive Date: | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| Analysis Lot: | KWG1009479 | Prep Lot: | | Report Group: | |
| Analysis Method: | Krone | Prep Method: | | | |
| Prep Ref: | | Prep Date: | | | |

| | | | |
|---|---|---|---|
| Quant Method: | J:\GC26\METHODS\083010-HTIN. | Calibration ID: | CAL9814 |
| Title: | | | |
| MB Ref: | | Method ID: | MJ133 |
| | | Quant based on Method | |

| | | | | | |
|---|---|---|---|---|---|
| Data File #1: | J:\GC26\DATA\090810A\0908F020.D | | | Instrument: | GC26 |
| Data File #2: | J:\GC26\DATA\090810A\0908F020.D\0908F020c.d | | | Vial: | 6 |
| Acqu Date: | 09/09/2010 03:40 | Quant Date: | 09/09/2010 07:11 | Dilution: | 1.0 |
| Run Type: | CCV | | | Soln Conc. Units: | ng/mL |
| Lab ID: | KWG1009479-4 | | | | |
| Signal #1: | RTX-1 | Signal #2: | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.13 | 5.55 | 935834 | 970120 | 38.10 | 45.50 | | | NA |
| | | | %Recovery = | | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

Final Conc. Units:

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.39 | 5.76 | 784360 | 827926 | 38.15 | 45.38 | | | |
| Tri-n-butyltin Cation | 7.40 | 6.70 | 1080315m | 1103493 | 36.91 | 41.99 | | | |
| Di-n-butyltin Cation | 8.40 | 7.66 | 1138476 | 1175893 | 29.40 | 34.67 | | | |
| n-Butyltin Cation | 9.38 | 8.60 | 1085665 | 1102967 | 24.49 | 28.65 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

# *Calibration Verification Report*

**Calibration ID:** CAL9814
**Method ID:** MJ133
**DataFile:** J:\GC26\DATA\090810A\0908F020.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.5E+4 | 1.9E+4 | -23.8 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 2.1E+4 | 1.6E+4 | -23.7 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.9E+4 | 2.4E+4 | -17.1 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.9E+4 | 3.0E+4 | -23.3 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 4.4E+4 | 3.5E+4 | -21.4 | | | |

# *Calibration Verification Report*

**Calibration ID:** CAL9814
**Method ID:** MJ133
**DataFile:** J:\GC26\DATA\090810A\0908F020.D\0908F020C.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.1E+4 | 1.9E+4 | -9.0 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.8E+4 | 1.7E+4 | -9.2 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.6E+4 | 2.5E+4 | -5.7 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.4E+4 | 3.1E+4 | -9.5 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.8E+4 | 3.5E+4 | -8.0 | | | |

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F020.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F020.D\FPD2B.CH
Acq On : 09 Sep 2010 3:40 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-6 Inst : GC26
Misc : SEMIVOA GC\W1009479\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:25 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | S | Tri-n-propyltin | 6.13 | 5.55 | 935834 | 970120 | 38.097 | 45.502 |
| | | Target Compounds | | | | | | |
| 2) | | Tetrabutyltin | 6.39 | 5.76 | 784360 | 827926 | 38.147 | 45.383 |
| 3) | | Tri-n-butyltin | 7.40 | 6.70 | 1080315 | 1103493 | 36.911m | 41.994 |
| 4) | | Di-n-butyltin | 8.40 | 7.66 | 1138476 | 1175893 | 29.397 | 34.666 |
| 5) | | n-Butyltin | 9.38 | 8.60 | 1085665 | 1102967 | 24.490 | 28.653 |

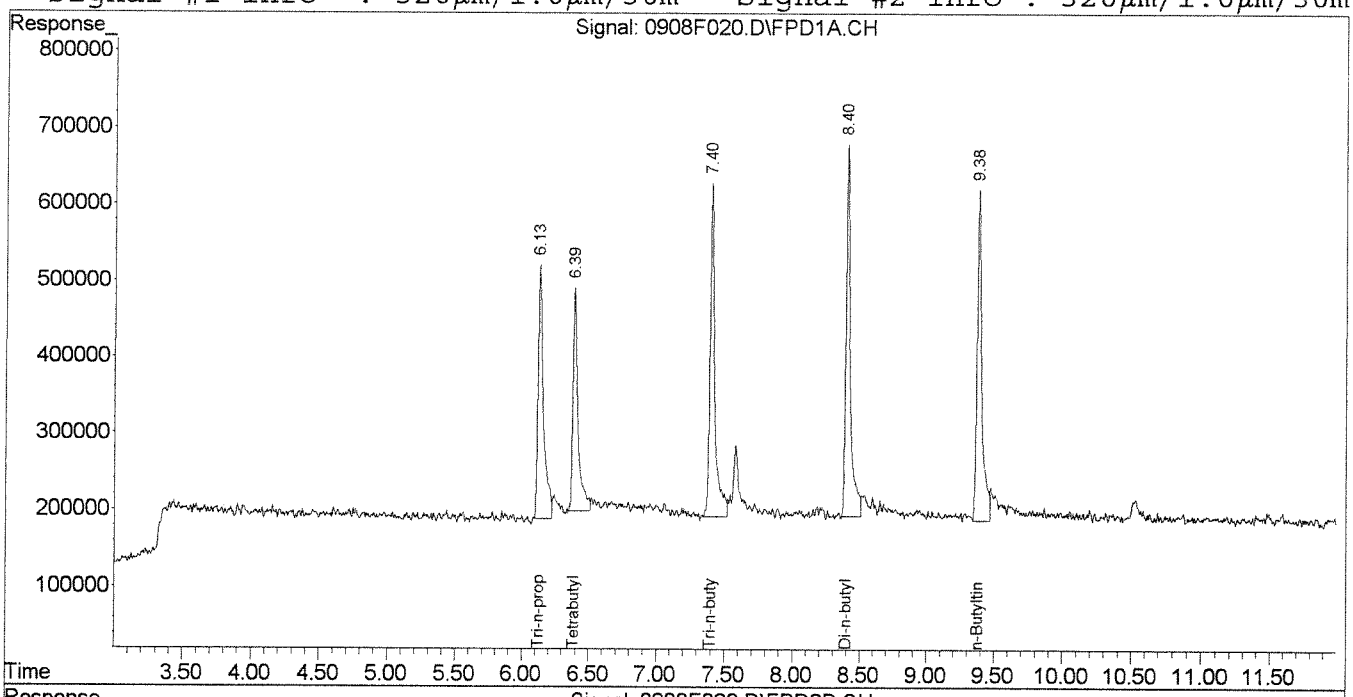
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

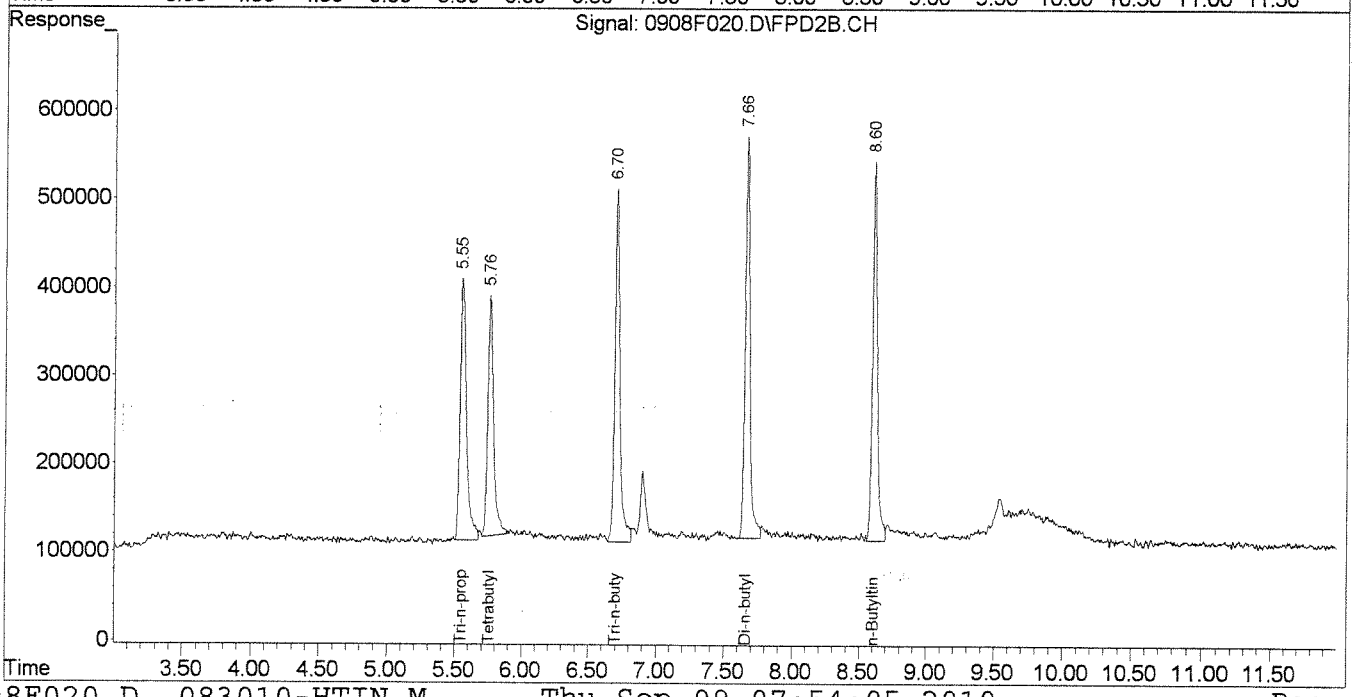
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F020.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F020.D\FPD2B.CH
Acq On : 09 Sep 2010 3:40 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-6 Inst : GC26
Misc : SEMIVOA GC\W1009479\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:11 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

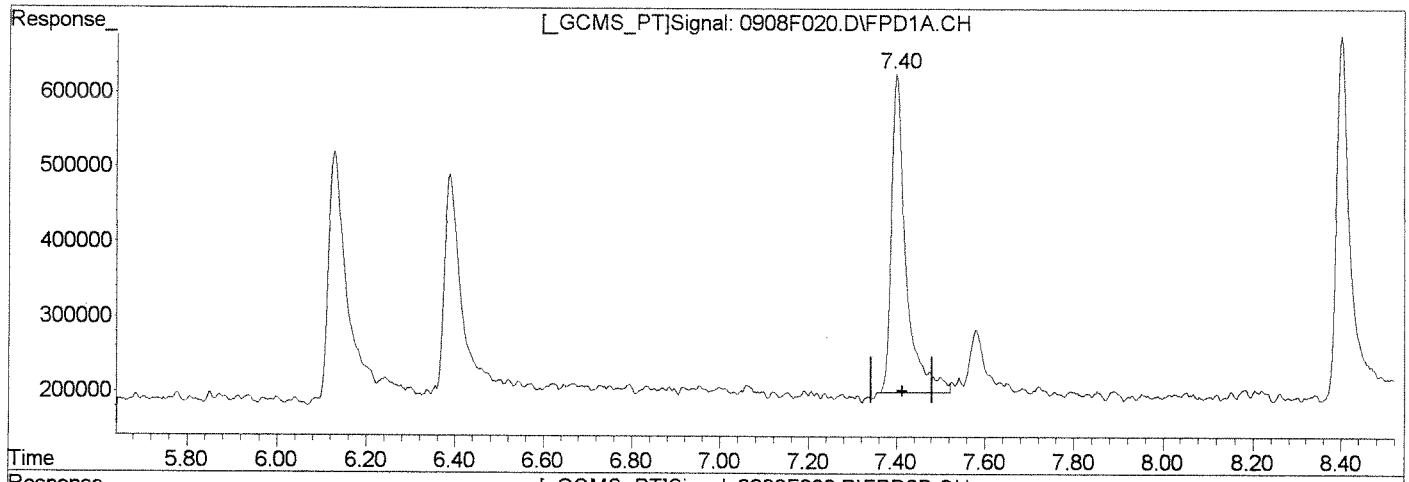


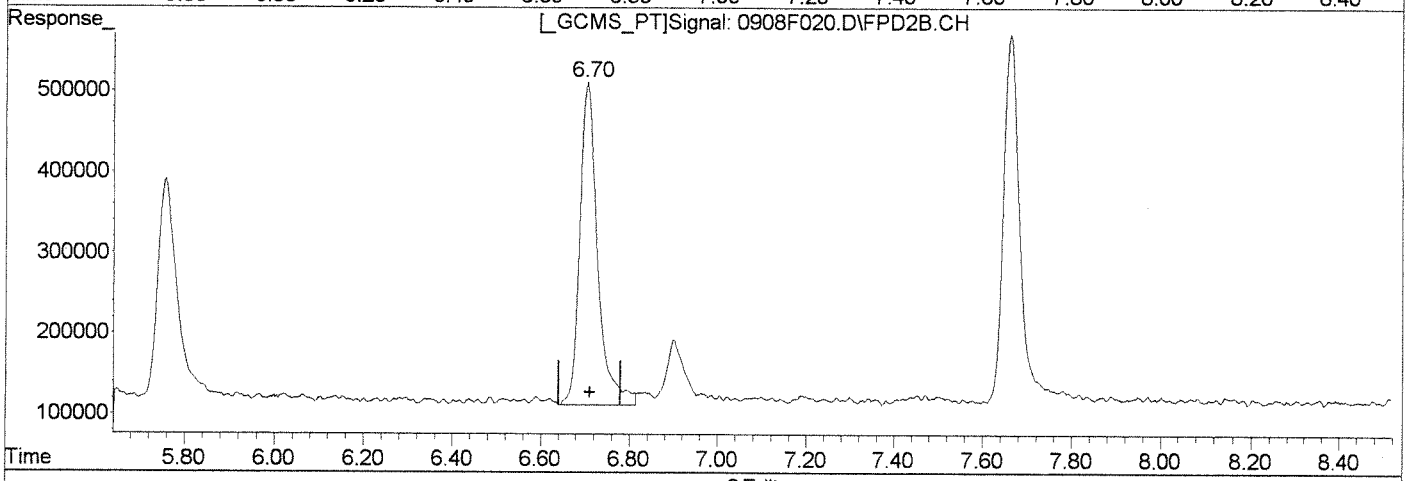



Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\090810A\0908F020.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F020.D\FPD2B.CH
Acq On : 09 Sep 2010 3:40 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-6 Inst : GC26
Misc : SEMIVOA GC\W1009479\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




(3) Tri-n-butyltin

7.40min 34.019ng/mL

response 995657

(3) Tri-n-butyltin #2

6.70min 41.994ng/mL

response 1103493

Manual Integration:

Before

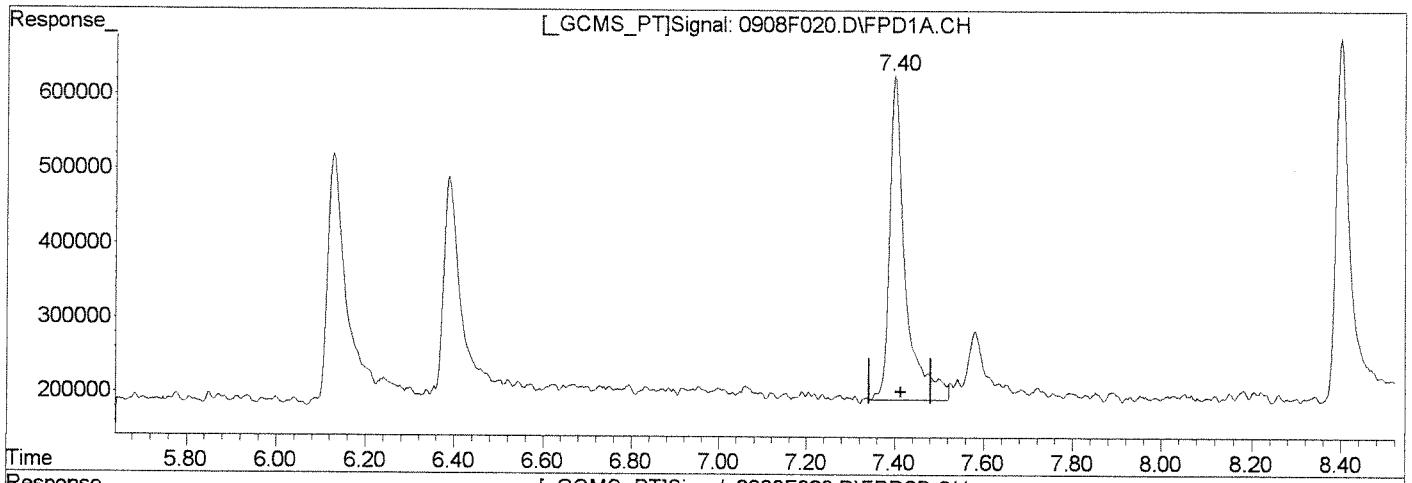
(+) = Expected Retention Time

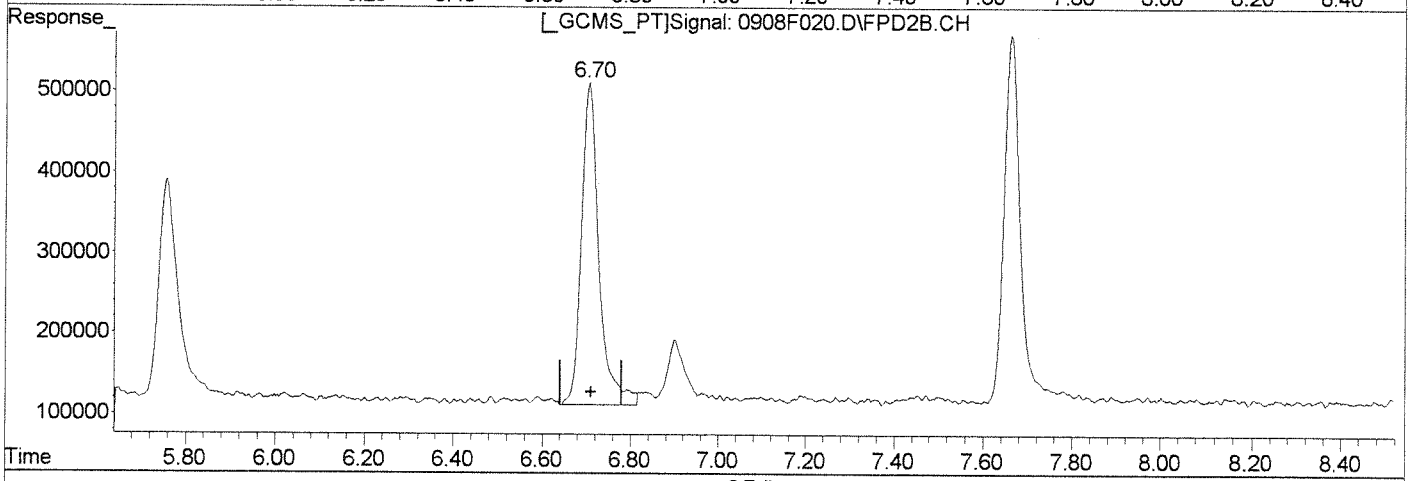
0908F020.D 083010-HTIN.M Thu Sep 09 07:10:55 2010

Quantitation Report (Qedit)

Signal #1 : J:\GC26\DATA\090810A\0908F020.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\090810A\0908F020.D\FPD2B.CH
Acq On : 09 Sep 2010 3:40 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009479-6 Inst : GC26
Misc : SEMIVOA GC\W1009479\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:09 2010 Quant Results File: 083010-HTIN.RES

Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration




QEdit

(3) Tri-n-butyltin
7.40min 36.911ng/mL m
response 1080315

(3) Tri-n-butyltin #2
6.70min 41.994ng/mL
response 1103493

Manual Integration:
After
Baseline/Shoulder
09/09/10

M99

(+) = Expected Retention Time
0908F020.D 083010-HTIN.M Thu Sep 09 07:11:03 2010

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/15/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F012.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 46 | 16200 | 14900 | -8 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 41 | 23700 | 22000 | -7 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 35 | 29700 | 27100 | -9 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 32 | 36000 | 36900 | 2 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 50 | 20300 | 20100 | -1 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/15/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F012.D\0915F012C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 49 | 18100 | 17800 | -2 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 47 | 25100 | 26600 | 6 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 41 | 31000 | 33200 | 7 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 32 | 36800 | 38400 | 4 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 52 | 20900 | 21900 | 5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F012.D
**Lab ID:** KWG1009780-4
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/15/2010 21:21
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: 9/16/10

Secondary Review: M 9/16/10

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F012.D\0915F012C.D
**Lab ID:** KWG1009780-4
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/15/2010 21:21
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/16/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/15/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F012.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F012.D\0915F012c.d | | | **Vial:** | 3 |
| **Acqu Date:** | 09/15/2010 21:21 | **Quant Date:** | 09/16/2010 08:52 | **Dilution:** | 1.0 |
| **Run Type:** | CCV | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009780-4 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.06 | 5.58 | 1006194 | 1094562 | 49.62 | 52.36 | | | NA |
| | | | | %Recovery = | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

Final Conc. Units:

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.32 | 5.78 | 745716 | 888729 | 46.13 | 49.09 | | | |
| Tri-n-butyltin Cation | 7.31 | 6.72 | 981076 | 1184420 | 41.33 | 47.25 | | | |
| Di-n-butyltin Cation | 8.31 | 7.68 | 1038003 | 1271076 | 34.92 | 40.96 | | | |
| n-Butyltin Cation | 9.27 | 8.62 | 1148356 | 1195055 | 31.92 | 32.45 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

# *Calibration Verification Report*

**Calibration ID:** CAL9871
**Method ID:** MJ133

**DataFile:** J:\GC26\DATA\091510C\0915F012.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.0E+4 | 2.0E+4 | -0.8 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.6E+4 | 1.5E+4 | -7.7 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.4E+4 | 2.2E+4 | -7.2 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.0E+4 | 2.7E+4 | -8.9 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.6E+4 | 3.7E+4 | 2.5 | | | |

# *Calibration Verification Report*

**Calibration ID:** CAL9871
**Method ID:** MJ133
**DataFile:** J:\GC26\DATA\091510C\0915F012.D\0915F012C.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.1E+4 | 2.2E+4 | 4.7 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.8E+4 | 1.8E+4 | -1.8 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.5E+4 | 2.7E+4 | 6.1 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.1E+4 | 3.3E+4 | 6.9 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.7E+4 | 3.8E+4 | 4.2 | | | |

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F012.D\FPD1A.CH Vial: 3
Signal #2 : J:\GC26\DATA\091510C\0915F012.D\FPD2B.CH
Acq On : 15 Sep 2010 9:21 pm Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009780-4 Inst : GC26
Misc : SEMIVOA GC\W1009780\4-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:38 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

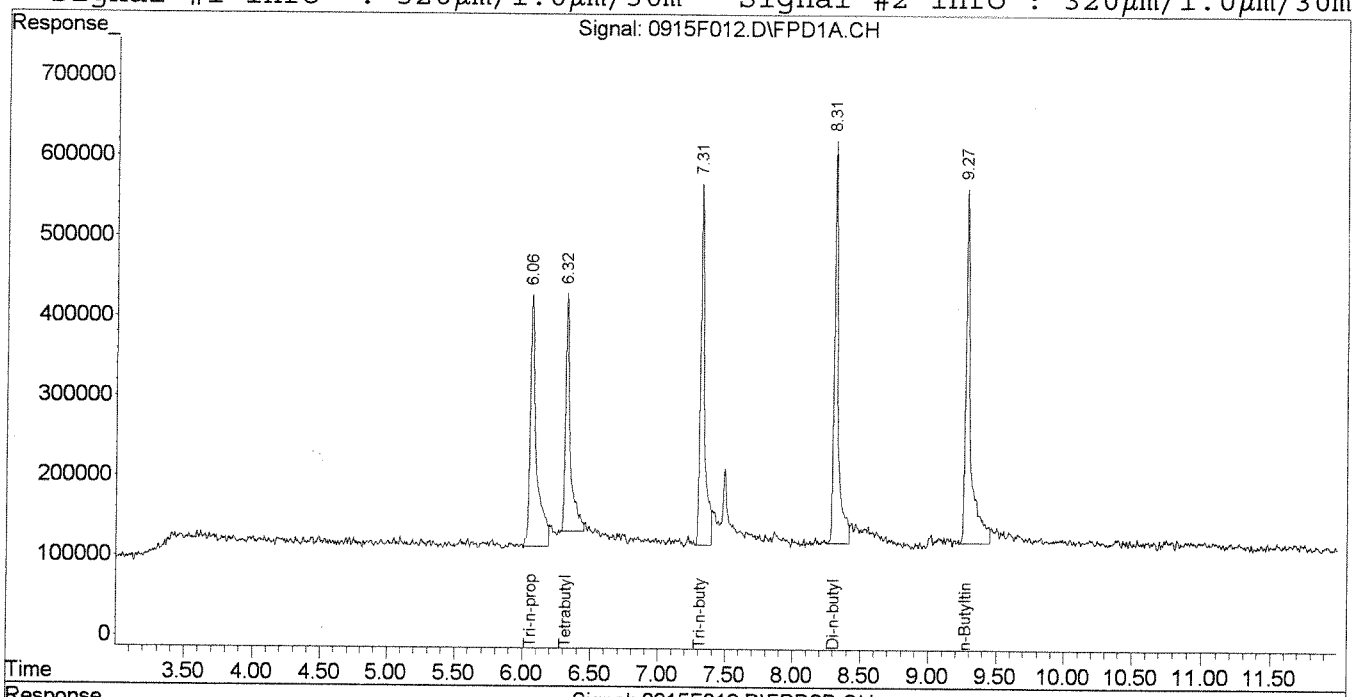
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 1006194 | 1094562 | 49.616 | 52.355 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 745716 | 888729 | 46.130 | 49.093 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 981076 | 1184420 | 41.328 | 47.249 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 1038003 | 1271076 | 34.923 | 40.961 |
| 5) | n-Butyltin | 9.27 | 8.62 | 1148356 | 1195055 | 31.917 | 32.452 |

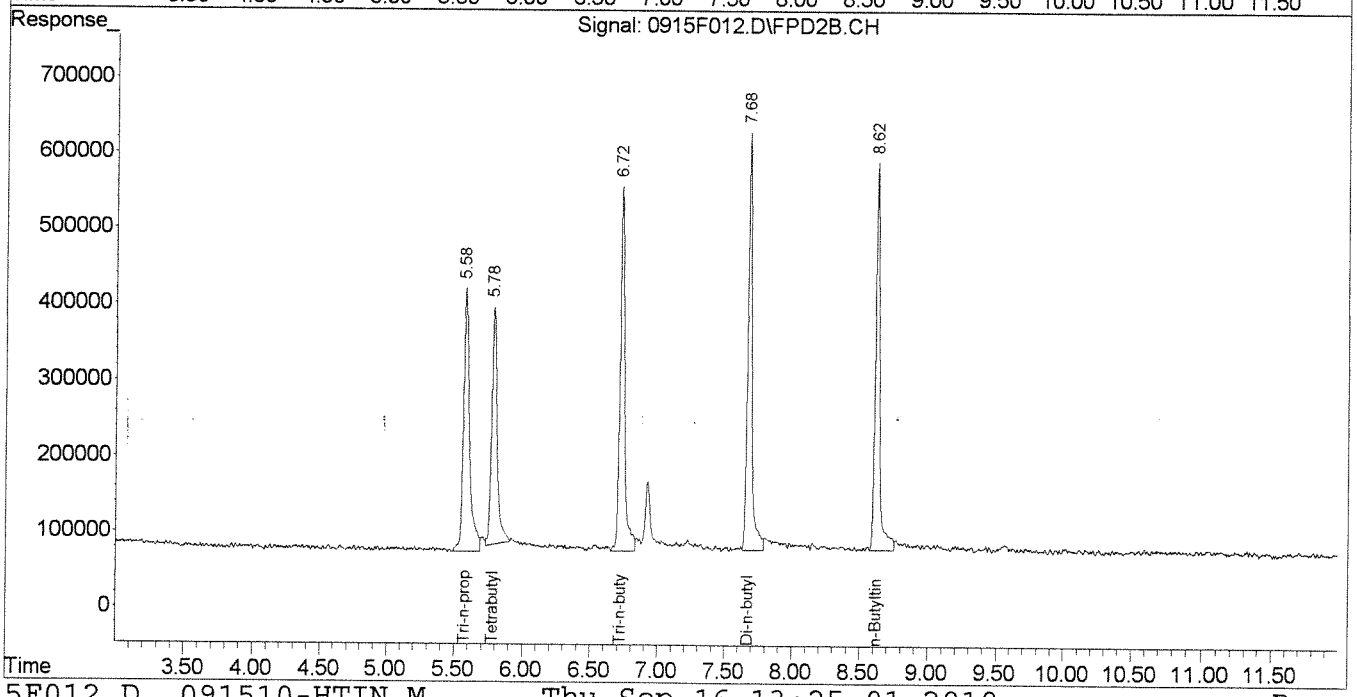
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F012.D\FPD1A.CH Vial: 3
Signal #2 : J:\GC26\DATA\091510C\0915F012.D\FPD2B.CH
Acq On : 15 Sep 2010 9:21 pm Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009780-4 Inst : GC26
Misc : SEMIVOA GC\W1009780\4-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/16/2010 |

## Continuing Calibration Verification Summary
## Butyltins (as cation)

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F025.D | **Column ID:** | RTX-1 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 44 | 16200 | 14300 | -11 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 47 | 23700 | 24900 | 5 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 41 | 29700 | 31600 | 6 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 28 | 36000 | 32900 | -9 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 46 | 20300 | 18500 | -9 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment/Task 18.8.1 | **Date Analyzed:** | 09/16/2010 |

**Continuing Calibration Verification Summary**
**Butyltins (as cation)**

| | | | |
|---|---|---|---|
| **Calibration Type:** | External Standard | **Calibration Date:** | 09/15/2010 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL9871 |
| **CCV Standard ID:** | OT4-28G | **Analysis Lot:** | KWG1009780 |
| | | **Units:** | ng/mL |
| **File ID:** | J:\GC26\DATA\091510C\0915F025.D\0915F025C.D | **Column ID:** | RTX-35 |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 50 | 42 | 18100 | 15200 | -16 | NA | ± 25 % | AverageRF |
| Tri-n-butyltin Cation | 45 | 45 | 25100 | 25400 | 1 | NA | ± 25 % | AverageRF |
| Di-n-butyltin Cation | 38 | 38 | 31000 | 31000 | 0 | NA | ± 25 % | AverageRF |
| n-Butyltin Cation | 31 | 31 | 36800 | 36600 | -1 | NA | ± 25 % | AverageRF |
| Tri-n-propyltin | 50 | 47 | 20900 | 19800 | -5 | NA | ± 25 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F025.D
**Lab ID:** KWG1009780-6
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/16/2010 00:57
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: _____

Secondary Review: _____

Printed: 09/16/2010 13:58:20
u:\Stealth\Crystal.rpt\except2.rpt

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F025.D\0915F025C.D
**Lab ID:** KWG1009780-6
**RunType:** CCV
**Matrix:** MISC

**Date Acquired:** 09/16/2010 00:57
**Date Quantitated:** 09/16/2010 08:52
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

Printed: 09/16/2010 13:58:23
u:\Stealth\Crystal.rpt\except2.rpt

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/15/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F025.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F025.D\0915F025c.d | | | **Vial:** | 6 |
| **Acqu Date:** | 09/16/2010 00:57 | **Quant Date:** | 09/16/2010 08:52 | **Dilution:** | 1.0 |
| **Run Type:** | CCV | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009780-6 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 6.06 | 5.58 | 923506 | 990730 | 45.54 | 47.39 | | | NA |
| | | | **%Recovery =** | | NA | NA | **Limits =** | 18-95 | |

## *Target Compounds*

**Final Conc. Units:**

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | 6.32 | 5.78 | 716652 | 762401 | 44.33 | 42.11 | | | |
| Tri-n-butyltin Cation | 7.31 | 6.72 | 1109853 | 1133147 | 46.75 | 45.20 | | | |
| Di-n-butyltin Cation | 8.31 | 7.68 | 1209522 | 1187514 | 40.69 | 38.27 | | | |
| n-Butyltin Cation | 9.27 | 8.62 | 1023870 | 1139539 | 28.46 | 30.94 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

# Calibration Verification Report

**Calibration ID:** CAL9871
**Method ID:** MJ133
**DataFile:** J:\GC26\DATA\091510C\0915F025.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.0E+4 | 1.8E+4 | -8.9 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.6E+4 | 1.4E+4 | -11.3 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.4E+4 | 2.5E+4 | 4.9 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.0E+4 | 3.2E+4 | 6.2 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.6E+4 | 3.3E+4 | -8.6 | | | |

# *Calibration Verification Report*

**Calibration ID:** CAL9871
**Method ID:** MJ133

**DataFile:** J:\GC26\DATA\091510C\0915F025.D\0915F025C.D

| Parameter Name | Type | PARM Type | Curve Fit | Method Criteria | Min RF | ICAL RF | CCV RF | %Diff | Sol'n Conc. | True Value | % Drift |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | | SURR | AverageRF | 25 | | 2.1E+4 | 2.0E+4 | -5.2 | | | |
| Tetra-n-butyltin | | MS | AverageRF | 25 | | 1.8E+4 | 1.5E+4 | -15.8 | | | |
| Tri-n-butyltin Cation | | MS | AverageRF | 25 | | 2.5E+4 | 2.5E+4 | 1.5 | | | |
| Di-n-butyltin Cation | | MS | AverageRF | 25 | | 3.1E+4 | 3.1E+4 | -0.1 | | | |
| n-Butyltin Cation | | MS | AverageRF | 25 | | 3.7E+4 | 3.7E+4 | -0.7 | | | |

Signal #1 : J:\GC26\DATA\091510C\0915F025.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\091510C\0915F025.D\FPD2B.CH
Acq On : 16 Sep 2010 12:57 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009780-6 Inst : GC26
Misc : SEMIVOA GC\W1009780\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:43 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

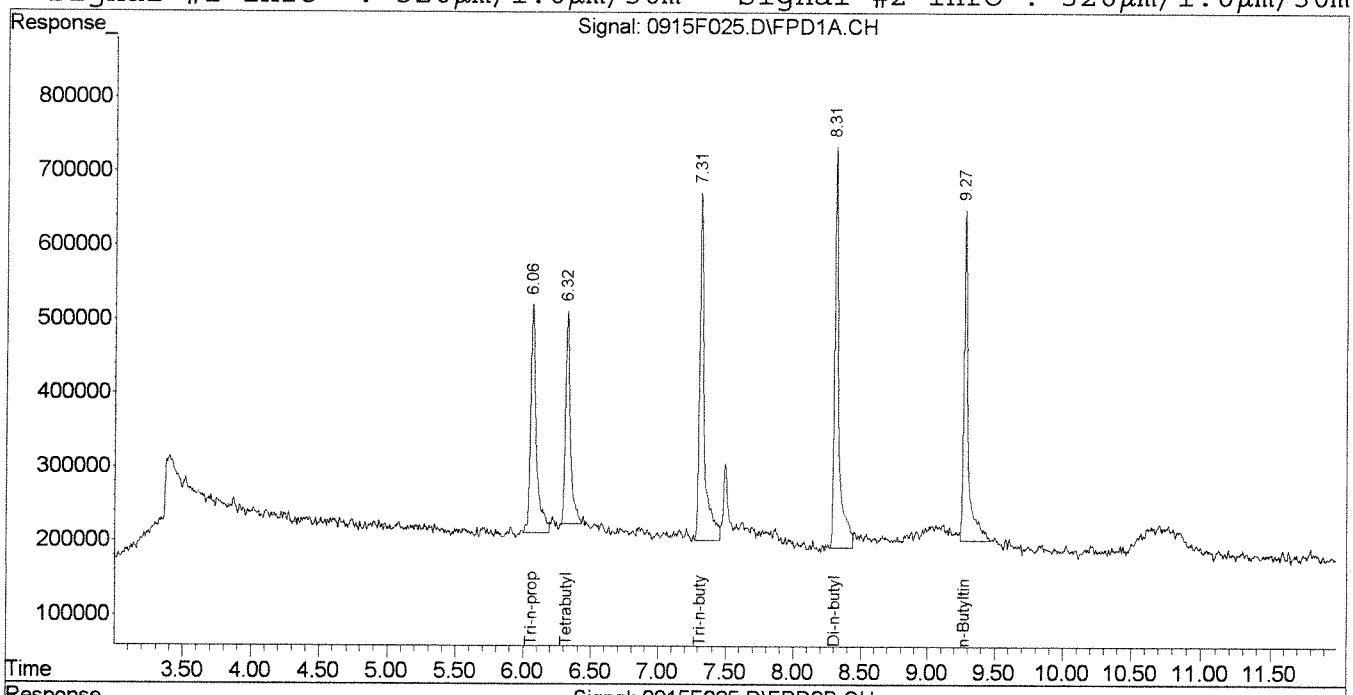
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tri-n-propyltin | 6.06 | 5.58 | 923506 | 990730 | 45.539 | 47.388 |
| | Target Compounds | | | | | | |
| 2) | Tetrabutyltin | 6.32 | 5.78 | 716652 | 762401 | 44.332 | 42.114 |
| 3) | Tri-n-butyltin | 7.31 | 6.72 | 1109853 | 1133147 | 46.753 | 45.203 |
| 4) | Di-n-butyltin | 8.31 | 7.68 | 1209522 | 1187514 | 40.694 | 38.268 |
| 5) | n-Butyltin | 9.27 | 8.62 | 1023870 | 1139539 | 28.457 | 30.944 |

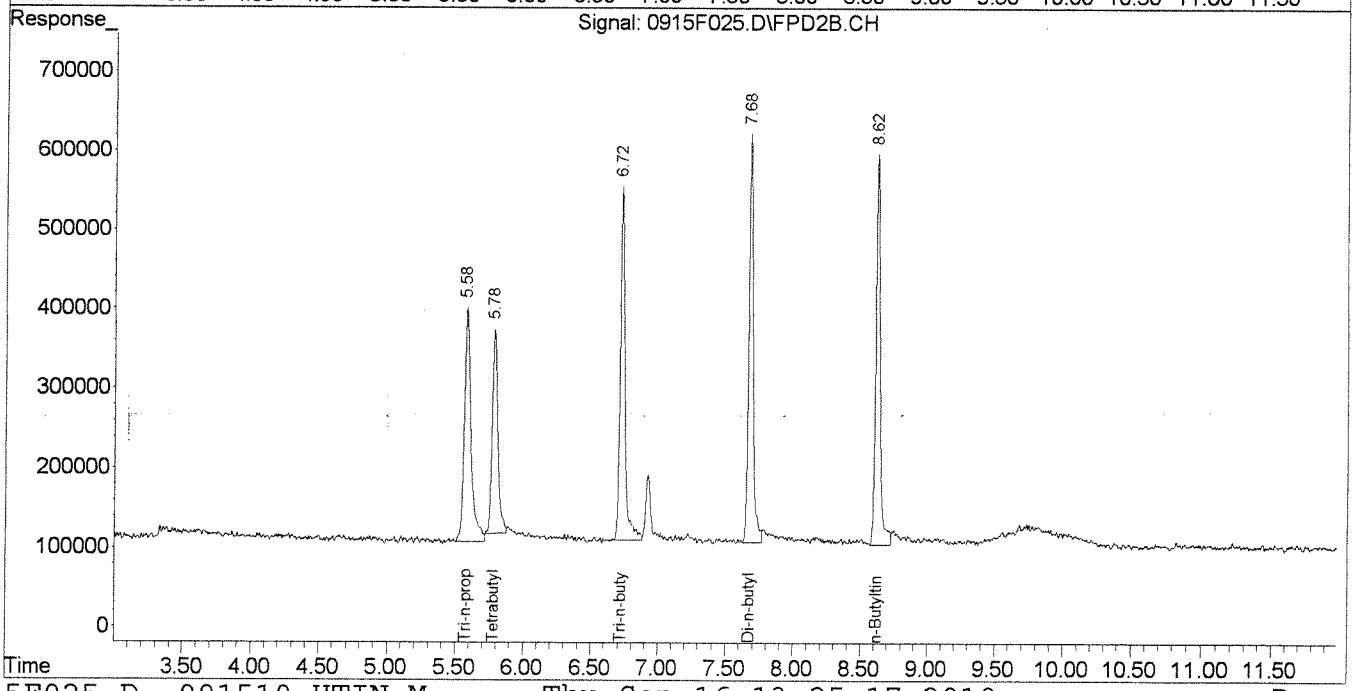
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F025.D\FPD1A.CH Vial: 6
Signal #2 : J:\GC26\DATA\091510C\0915F025.D\FPD2B.CH
Acq On : 16 Sep 2010 12:57 am Operator: CCotnam
Sample : TINS @ 50ppb | OT4-28G | KWG1009780-6 Inst : GC26
Misc : SEMIVOA GC\W1009780\6-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 8:52 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# Organic Analysis:
# Butyltins (as cation)

## Validation Package

## Sample Prep and Screen Data

# Preparation Information

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1009567 | **Prep Method:** | ~~SOC-OSWT~~ annulew Method | **Prep Date:** | 08/24/10 00:00 |
| **Department:** | Semivoa GC | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. | Solids |
|---|---|---|---|---|---|---|
| K1008775-001 | MBP1+2- Comp | Butyltins BUTYL | SEDIMENT | 20.44g | 4mL | |
| K1008775-002 | LA-5-Comp | Butyltins BUTYL | SEDIMENT | 20.33g | 4mL | |
| K1008775-003 | BD-08 | Butyltins BUTYL | SEDIMENT | 20.30g | 4mL | |
| K1008857-001 | LPRC07C | Butyltins BUTYL | SEDIMENT | 20.16g | 4mL | |
| K1008857-002 | LPRC13A | Butyltins BUTYL | SEDIMENT | 20.04g | 4mL | |
| K1008973-001 | SB-813 (0.5-2.0) | Butyltins BUTYL | SOIL | 20.03g | 4mL | |
| K1008973-002 | SB-816 (2-4) | Butyltins BUTYL | SOIL | 20.05g | 4mL | |
| K1008973-003 | SB-819 (0-0.5) | Butyltins BUTYL | SOIL | 20.07g | 4mL | |
| K1008973-004 | SB-815 (0-0.5) | Butyltins BUTYL | SOIL | 20.10g | 4mL | |
| K1008973-005 | SB-823 (4-6) | Butyltins BUTYL | SOIL | 20.21g | 4mL | |
| KWG1009567-1 | Matrix Spike | Butyltins BUTYL | SEDIMENT | 20.03g | 4mL | |
| KWG1009567-2 | Duplicate Matrix Spike | Butyltins BUTYL | SEDIMENT | 20.20g | 4mL | |
| KWG1009567-3 | Lab Control Sample | Butyltins BUTYL | SEDIMENT | 20.00g | 4mL | |
| KWG1009567-4 | Method Blank | Butyltins BUTYL | SEDIMENT | 20.44g | 4mL | |
| KWG1009567-5 | Standard Reference Material | Butyltins BUTYL | SEDIMENT | 1.00g | 4mL | |

| Lab Code | Parent Lab Code | Comments |
|---|---|---|
| KWG1009567-1 | K1008775-002 | KQ1008674-01 |
| KWG1009567-2 | K1008775-002 | KQ1008674-02 |
| KWG1009567-3 | | KQ1008674-03 |
| KWG1009567-4 | | KQ1008674-04 |
| KWG1009567-5 | | KQ1008674-05 |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| K1008775-001 | 953727 | | | | | SSulliva |
| K1008775-002 | 953728 | | | | | SSulliva |
| K1008775-003 | 953729 | | | | | SSulliva |
| K1008857-001 | 953730 | | | | | SSulliva |
| K1008857-002 | 953731 | | | | | SSulliva |
| K1008973-001 | 953732 | | | | | SSulliva |
| K1008973-002 | 953733 | | | | | SSulliva |
| K1008973-003 | 953734 | | | | | SSulliva |
| K1008973-004 | 953735 | | | | | SSulliva |
| K1008973-005 | 953736 | | | | | SSulliva |
| KWG1009567-1 | 953737 | | | | | SSulliva |

**Comments:**

Started By: EErickso Assisted By: Training Yes No

Completed By: EErickso Assisted By: Yes No

Reviewed By: h Date: 9/10/10 Storage:

Chain of Custody

Relinquished By: EE Date: 9-9-10

Received By: h Date: 9/10/10 Extracts Examined Yes No

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1009567 | **Prep Method:** | ~~SOC-OSWT~~ Method | **Prep Date:** | 08/24/10 00:00 |
| **Department:** | Semivoa GC | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| KWG1009567-2 | 953738 | | | | | SSulliva |
| KWG1009567-3 | 953739 | | | | | SSulliva |
| KWG1009567-4 | 953740 | | | | | SSulliva |
| KWG1009567-5 | 953741 | | | | | SSulliva |

**Comments:**

Started By: EErickso Assisted By: Training Yes No

Completed By: EErickso Assisted By: Yes No

Reviewed By: Date: 9/16/10 Storage:

Chain of Custody

Relinquished By: Date: 9-9-10

Received By: Date: 9/15/10 Extracts Examined Yes No

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117908
**Team**: Semivoa GC
**Analyst**: EErickson
**Prep Workflow**: OrgExtTINS14
**Prep Method**: SOC-OSWT
**Rush/NPDES**: N/A
**Status**: Prepped
**Current Step**: Final Volume
**Prep Date**: 08/24/2010 00:00
**Due Date**: 08/25/2010

| Lab Code | Client ID | Bottle # | Target Amt | Initial Amt | Final Volume | TestNo List | Comments |
|---|---|---|---|---|---|---|---|
| K1008775-001 | MBP1+2- Comp | .03 | 27.51 g | 20.44 g | 4 mL | BUTYLTINS | |
| K1008775-002 | LA-5-Comp | .02 | 30.26 g | 20.33 g | 4 mL | BUTYLTINS | |
| K1008775-003 | BD-08 | .02 | 27.32 g | 20.30 g | 4 mL | BUTYLTINS | |
| K1008857-001 | LPRC07C | .02 | 30.26 g | 20.16 g | 4 mL | BUTYLTINS | |
| K1008857-002 | LPRC13A | .02 | 27.43 g | 20.04 g | 4 mL | BUTYLTINS | |
| K1008973-001 | SB-813 (0.5-2.0) | .02 | 21.74 g | 20.03 g | 4 mL | BUTYLTINS_TBT | |
| K1008973-002 | SB-816 (2-4) | .02 | 20.39 g | 20.05 g | 4 mL | BUTYLTINS_TBT | |
| K1008973-003 | SB-819 (0-0.5) | .02 | 20.83 g | 20.07 g | 4 mL | BUTYLTINS_TBT | |
| K1008973-004 | SB-815 (0-0.5) | .02 | 20.73 g | 20.10 g | 4 mL | BUTYLTINS_TBT | |
| K1008973-005 | SB-823 (4-6) | .02 | 22.52 g | 20.21 g | 4 mL | BUTYLTINS_TBT | |
| K1008775-002: KQ1008674-01 | Matrix Spike | .02 | 20.00 g | 20.03 g | 4 mL | BUTYLTINS | |
| K1008775-002: KQ1008674-02 | Duplicate Matrix Spike | .02 | 20.00 g | 20.20 g | 4 mL | BUTYLTINS | |
| KQ1008674-03 | Lab Control Sample | | 20.00 g | 20.00 g | 4 mL | BUTYLTINS, BUTYLTINS_TBT | |
| KQ1008674-04 | Method Blank | | 20.00 g | 20.44 g | 4 mL | BUTYLTINS, BUTYLTINS_TBT | |
| KQ1008674-05 | Standard Reference Material | | 20.00 g | 1.00 g | 4 mL | BUTYLTINS, BUTYLTINS_TBT | |

15 Total Samples consisting of 10 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

**Witness**: SSullivan

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 24-AUG-10 00:00 | 24-AUG-10 00:00 | EErickson | | N | |
| Final Volume | 09-SEP-10 00:00 | 09-SEP-10 00:00 | EErickson | | N | |

## Comments

## Review

Reviewed by: _____ Date: 9/10/10

**Chain of Custody**

| | | | |
|---|---|---|---|
| Relinquished By: | EE | Date: 9-9-10 | Extracts/Digestions Examined: Yes (circled) No |
| Received By: | | Date: 9/10/10 | |

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117908
**Team**: Semivoa GC
**Analyst**: EERICKSON
**Prep Workflow**: OrgExtTINS14
**Prep Method**: SOC-OSWT
**Rush/NPDES**: N/A
**Status**: Draft
**Current Step**: Extraction
**Prep Date**: ~~08/23/2010~~ 8-24-10 EE 10:17
**Due Date**: 08/25/2010

| Lab Code | Client ID | Bottle # | ✓ | Target Amt | Initial Amount | Inter. Volume | Final Volume | Surr Amt | Spike Amt | TestNo List |
|---|---|---|---|---|---|---|---|---|---|---|
| K1008775-001 | MBP1+2- Comp | .03 | ✓ | 27.51 g | 20.44 | ~~4mL~~ ~~ADA~~ 8-24-10 EE | 4mL | 100uL | NA | BUTYLTINS |
| K1008775-002 | LA-5-Comp | .02 | ✓ | 30.26 g | 20.33 | | | | | BUTYLTINS |
| K1008775-003 | BD-08 | .02 | ✓ | 27.32 g | 20.30 | | | | | BUTYLTINS |
| * K1008857-001 | LPRC07C | .02 | ✓ | 30.26 g | 20.16 | | | | | BUTYLTINS |
| * K1008857-002 | LPRC13A | .02 | ✓ | 27.43 g | 20.04 | | | | | BUTYLTINS |
| K1008973-001 | SB-813 (0.5-2.0) | .02 | ✓ | 20.00 g | 20.03 | | | | | BUTYLTINS_TBT |
| K1008973-002 | SB-816 (2-4) | .02 | ✓ | 20.00 g | 20.05 | | | | | BUTYLTINS_TBT |
| K1008973-003 | SB-819 (0-0.5) | .02 | ✓ | 20.00 g | 20.07 | | | | | BUTYLTINS_TBT |
| K1008973-004 | SB-815 (0-0.5) | .02 | ✓ | 20.00 g | 20.10 | | | | | BUTYLTINS_TBT |
| * K1008973-005 | SB-823 (4-6) | .02 | ✓ | 20.00 g | 20.21 | | | | | BUTYLTINS_TBT |
| K1008775-002: KQ1008674-01 | Matrix Spike | .02 | | 20.00 g | 20.03 | | | | 100uL | BUTYLTINS |
| K1008775-002: KQ1008674-02 | Duplicate Matrix Spike | .02 | | 20.00 g | 20.20 | | | | | BUTYLTINS |
| * KQ1008674-03 | Lab Control Sample | | | 20.00 g | 20.00 | | | | | BUTYLTINS, BUTYLTINS_TBT |
| KQ1008674-04 | Method Blank | | | 20.00 g | 20.44 | | | | — | BUTYLTINS, BUTYLTINS_TBT |
| KQ1008674-05 | Standard Reference Material PACS-2 | | | 20.00 g | 1.00 | | | | — | BUTYLTINS, BUTYLTINS_TBT |

15 Total Samples consisting of 10 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

**Witness**: [signature] 8-24-10

**Spiking Solutions**

OT4-28H 5PPM XP 10-17-10 ~~8~~ EE 8/23/10 100uL

OT4-28D 5PPM XP 9-13-10 100uL

**Preparation Steps**

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 8-24-10 | | EE | | | |
| Final Volume | 9-8-10 9-9-10 EE | | EE | | | |

Archive - Nine

* extracts received 2 alumina/silica gel c-u's. 9-8-10 EE

**Comments**

# Additional Prep Information For Organotin Soil Extractions

Service Request #K1008775/8857/8973 Work Group Number KQ1008674

Pre-Prep Information:

DCM Lot #: DC007
Hexane Lot #: 50062
HCl Lot #: 20101101
$H_2O$ Lot #: 50090
Tropolone Lot#: XY7168

$Na_2SO_4$ (G) Lot #: BD1603
$Na_2SO_4$ (P) Lot #: G2010025P
Grignard Lot #: 244
DMD Lot#: ~~G2010025P~~ EE 9/10/10 081910
Pentane Lot #: 50084

Acidified? : yes

Tumbler (16hr.) start time/date/initial: 1805 8-24-10 EE
Tumbler (16hr.) end time/date/initial: 1220 8-25-10 EE

$H_2O$ Wash? : yes

Date Derivatization started (date/initial): 9-8-10 EE
Date Derivatization ended (date/initial): 9-8-10 EE
9 EE 9/10/10

DMD (volume/date/initial): 1mL
9 EE 9/10/10

Alumina (3610)/Silica Gel (3630) (date/initial): 9-8-10 EE

Comments/Observations:

| Bench Sheet Review Check List |
|---|
| ☐ Hold Times Met (if no, Reason: ) |
| ☐ Prep date, dept, method, product code correct in stealth |
| ☐ Spike Information correct |
| ☐ Weights/Volumes and units correct on raw and final bench sheets |
| ☐ Sample IDs have been checked—Bottle numbers appended if required |
| ☐ Names present for: Started by, Completed by, relinquished by, and witnessed by. |
| ☐ Training has been circled |
| ☐ Extract Storage recorded |
| ☐ Additional Prep Sheet completely filled out ( NA or line out Blanks) |
| ☐ All clean-ups have been noted on additional prep sheet |
| ☐ Signed service request with Form V, if applicable, has been attached |

R:\SVG\FORMS\OTPREPSOIL.DOC

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | KWG1009459 | **Prep Method:** | EPA 3520C | **Prep Date:** | 08/23/10 00:00 |
| **Department:** | Semivoa GC | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. | Solids |
|---|---|---|---|---|---|---|
| K1008857-003 | LPRC07C-RB | Butyltins BUTYL | WATER | 500mL | 1mL | |
| K1008973-006 | MW-4R | Butyltins BUTYL | GROUND W | 500mL | 1mL | |
| K1008973-007 | MW-3R | Butyltins BUTYL | GROUND W | 500mL | 1mL | |
| K1008973-008 | MW-2 | Butyltins BUTYL | GROUND W | 500mL | 1mL | |
| K1008973-009 | MW-1 | Butyltins BUTYL | GROUND W | 500mL | 1mL | |
| KWG1009459-1 | Lab Control Sample | Butyltins BUTYL | WATER | 500mL | 1mL | |
| KWG1009459-2 | Duplicate Lab Control Sampl | Butyltins BUTYL | WATER | 500mL | 1mL | |
| KWG1009459-3 | Method Blank | Butyltins BUTYL | WATER | 500mL | 1mL | |

| Lab Code | Parent Lab Code | Comments |
|---|---|---|
| KWG1009459-1 | | KQ1008671-01 |
| KWG1009459-2 | | KQ1008671-02 |
| KWG1009459-3 | | KQ1008671-03 |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| K1008857-003 | 952802 | | | | | BRice |
| K1008973-006 | 952803 | | | | | BRice |
| K1008973-007 | 952804 | | | | | BRice |
| K1008973-008 | 952805 | | | | | BRice |
| K1008973-009 | 952806 | | | | | BRice |
| KWG1009459-1 | 952807 | | | | | BRice |
| KWG1009459-2 | 952808 | | | | | BRice |
| KWG1009459-3 | 952809 | | | | | BRice |

**Comments:**

Started By: EErickso Assisted By: Training Yes No

Completed By: EErickso Assisted By: Yes No

Reviewed By: Date: 9/10 Storage:

Chain of Custody

Relinquished By: EE Date: 9-7-10

Received By: Date: 9/8/10

Extracts Examined Yes No

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run**: 117905
**Team**: Semivoa GC
**Analyst**: EErickson
**Prep Workflow**: OrgExtTIN-aq7
**Prep Method**: EPA 3520C
**Rush/NPDES**: N/A
**Status**: Prepped
**Current Step**: Final Volume
**Prep Date**: 08/23/2010 00:00
**Due Date**: 09/04/2010

| Lab Code | Client ID | Bottle # | Initial Amt | pH Initial | pH Adj 1 | Final Volume | TestNo List | Comments |
|---|---|---|---|---|---|---|---|---|
| K1008857-003 | LPRC07C-RB | .04 | 500 mL | <2 | NA | 1 mL | BUTYLTINS | |
| K1008973-006 | MW-4R | .01 | 500 mL | <2 | NA | 1 mL | BUTYLTINS_TBT | |
| K1008973-007 | MW-3R | .01 | 500 mL | <2 | NA | 1 mL | BUTYLTINS_TBT | |
| K1008973-008 | MW-2 | .01 | 500 mL | <2 | NA | 1 mL | BUTYLTINS_TBT | |
| K1008973-009 | MW-1 | .01 | 500 mL | <2 | NA | 1 mL | BUTYLTINS_TBT | |
| KQ1008671-01 | Lab Control Sample | | 500 mL | <2 | NA | 1 mL | BUTYLTINS, BUTYLTINS_TBT | |
| KQ1008671-02 | Duplicate Lab Control Sample | | 500 mL | <2 | NA | 1 mL | BUTYLTINS, BUTYLTINS_TBT | |
| KQ1008671-03 | Method Blank | | 500 mL | <2 | NA | 1 mL | BUTYLTINS, BUTYLTINS_TBT | |

8 Total Samples consisting of 5 Client Samples, 0 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

## Spiking Solutions

**Witness**: BRice

## Preparation Steps

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 23-AUG-10 00:00 | 23-AUG-10 00:00 | EErickson | BRice | N | |
| Final Volume | 07-SEP-10 00:00 | 07-SEP-10 00:00 | EErickson | | N | |

## Comments

## Review

Reviewed by: _____ Date: _____

## Chain of Custody

Relinquished By: EE Date: 9-7-10

Received By: G Date: 9/8/10

Extracts/Digestions Examined: Yes (circled) No

Columbia Analytical Services™ **Preparation Information Benchsheet**

**Prep Run:** 117905 **Prep Workflow:** OrgExtTIN-aq7 **Status:** Draft **Prep Date:** 08/23/2010 10:08
**Team:** Semivoa GC **Prep Method:** EPA 3520C **Current Step:** Extraction **Due Date:** 08/26/2010
**Analyst:** EERICKSON **Rush/NPDES:** N/A

| Lab Code | Client ID | Bottle # | ✓ | Initial Amount | pH Initial | pH Adj 1 | Inter. Volume | Final Volume | Surr Amt | Spike Amt | TestNo List |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K1008857-003 | LPRC07C-RB | .04 | ✓ | 500mL | <2 | NA | NA | 1mL | 50uL | — | BUTYLTINS |
| K1008973-006 | MW-4R | .01 | ✓ | | | | | | | — | BUTYLTINS_TBT |
| K1008973-007 | MW-3R | .01 | ✓ | | | | | | | — | BUTYLTINS_TBT |
| K1008973-008 | MW-2 | .01 | ✓ | | | | | | | — | BUTYLTINS_TBT |
| K1008973-009 | MW-1 | .01 | ✓ | | | | | | | — | BUTYLTINS_TBT |
| KQ1008671-01 | Lab Control Sample | | | | | | | | | 50uL | BUTYLTINS, BUTYLTINS_TBT |
| KQ1008671-02 | Duplicate Lab Control Sample | | | | | | | | | | BUTYLTINS, BUTYLTINS_TBT |
| KQ1008671-03 | Method Blank | | | | | | | | | — | BUTYLTINS, BUTYLTINS_TBT |

8 Total Samples consisting of 5 Client Samples, 0 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions** **Witness:** 8/23/10

Surrogate: OTY-281, 5ppm in Acetone, 10/17/10, 50uL

Spike: OTY-250, 5ppm in acetone, 9/13/10, 50uL

**Preparation Steps**

| Step | Started | Finished | By | Assisted By | Training? | Comments |
|---|---|---|---|---|---|---|
| Extraction | 8-23-10 | | BRice/EErickson | | | |
| Final Volume | 9-7-10 | | EE | | | |

**Comments**

# Additional Prep Information For Organotin Water Extractions (3520)

Service Request # 8557, 8973, Work Group Number KQ1008671

Pre-Prep Information:

DCM Lot #: DB3911
HCl Lot #: 20101101
$H_2O$ Lot #: 50090
Pentane Lot #: 50084

$Na_2SO_4$ (G) Lot #: BD1003
Grignard Lot #: 244
Tropolone Lot #: X4768
Hexane Lot #: 50062

Acidified? : _____

Continuous (18 hr.) start time/date/initial: 16:50 / 8-23-10 / B
Continuous (18 hr.) end time/date/initial: 10:50 / 8-23-10 / B

Date Derivatization started (date/initial): 9-7-10 EE
Date Derivatization ended (date/initial): 9-7-10 EE

Alumina (3610)/Silica Gel (3630) (date/initial): 9-7-10 EE (2x)

Comments/Observations:

| Bench Sheet Review Check List |
|---|
| ☐ Hold Times Met (if no, Reason: _____) |
| ☐ Prep date, dept, method, product code correct in stealth |
| ☐ Spike Information correct |
| ☐ Weights/Volumes and units correct on raw and final bench sheets |
| ☐ Sample IDs have been checked—Bottle numbers appended if required |
| ☐ Names present for: Started by, Completed by, relinquished by, and witnessed by. |
| ☐ Training has been circled |
| ☐ Extract Storage recorded |
| ☐ Additional Prep Sheet completely filled out ( NA or line out Blanks) |
| ☐ All clean-ups have been noted on additional prep sheet |
| ☐ Signed service request with Form V, if applicable, has been attached |

R:\SVG\FORMS\OTPREPH2O.DOC

Sequence Name: C:\GC26\SEQUENCE\090810A.S
Comment:
Operator: CCotnam
Data Path: C:\GC26\DATA\090810A\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

CAL 9814
run # 215896

| Line | Type | Vial | DataFile | Method | Sample Name | | |
|---|---|---|---|---|---|---|---|
| 1 | Clocksrt - 19:40 | | | | | | |
| 2 | SOLN | 100 | 0908FP01 | TINS2 | PRIMER | | |
| 3 | SOLN | 100 | 0908FP02 | TINS2 | PRIMER | | |
| 4 | SOLN | 100 | 0908FP03 | TINS2 | PRIMER | | |
| 5 | SOLN | 100 | 0908FP04 | TINS2 | PRIMER | | |
| 6 | SOLN | 100 | 0908FP05 | TINS2 | PRIMER | | |
| 7 | SOLN | 100 | 0908FP06 | TINS2 | PRIMER | | |
| 8 | SOLN | 100 | 0908FP07 | TINS2 | PRIMER | | |
| 9 | SOLN | 100 | 0908FP08 | TINS2 | PRIMER | | |
| 10 | SOLN | 100 | 0908FP09 | TINS2 | PRIMER | | |
| 11 | SOLN | 100 | 0908FP10 | TINS2 | PRIMER | | |
| 12 | IB | 4 | 0908F001 | TINS2 | IB | | |
| 13 | IB | 5 | 0908F002 | TINS2 | KWG1009479-3 | IB | Butyltins |
| 14 | CCV | 6 | 0908F003 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 |
| 15 | IB | 4 | 0908F004 | TINS2 | IB | | |
| 16 | MB | 15 | 0908F005 | TINS2 | KWG1009459-3 | MB | Butyltins |
| 17 | LCS | 16 | 0908F006 | TINS2 | KWG1009459-1 | LCS | Butyltin |
| 18 | DLCS | 17 | 0908F007 | TINS2 | KWG1009459-2 | DLCS | Butylti |
| 19 | SMPL | 18 | 0908F008 | TINS2 | K1008857-003 | LPRC07C-RB | |
| 20 | SMPL | 19 | 0908F009 | TINS2 | K1008973-006 | MW-4R | |
| 21 | SMPL | 20 | 0908F010 | TINS2 | K1008973-007 | MW-3R | |
| 22 | SMPL | 21 | 0908F011 | TINS2 | K1008973-008 | MW-2 | |
| 23 | SMPL | 22 | 0908F012 | TINS2 | K1008973-009 | MW-1 | |
| 24 | MB | 23 | 0908F013 | TINS2 | KWG1009460-4 | MB | Butyltins |
| 25 | LCS | 24 | 0908F014 | TINS2 | KWG1009460-3 | LCS | Butyltin |
| 26 | SMPL | 25 | 0908F015 | TINS2 | K1008685-001 | LPRC02A | |
| 27 | SMPL | 26 | 0908F016 | TINS2 | K1008685-002 | LPRC03A | |
| 28 | SMPL | 27 | 0908F017 | TINS2 | K1008685-003 | LPRC03B | |
| 29 | IB | 4 | 0908F018 | TINS2 | IB | | |
| 30 | IB | 5 | 0908F019 | TINS2 | KWG1009479-5 | IB | Butyltins |
| 31 | CCV | 6 | 0908F020 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 |
| 32 | IB | 4 | 0908F021 | TINS2 | IB | | |
| 33 | SMPL | 28 | 0908F022 | TINS2 | K1008685-004 | LPRC02B | |
| 34 | SMPL | 29 | 0908F023 | TINS2 | K1008685-005 | LPRC04A | |
| 35 | SMPL | 30 | 0908F024 | TINS2 | K1008685-006 | LPRC04B | |
| 36 | SMPL | 31 | 0908F025 | TINS2 | K1008685-007 | LPRC04C | |
| 37 | SMPL | 32 | 0908F026 | TINS2 | K1008685-008 | LPRC04D | |
| 38 | SMPL | 33 | 0908F027 | TINS2 | K1008685-009 | LPRC05B | |
| 39 | SMPL | 34 | 0908F028 | TINS2 | K1008685-010 | LPRC05A | |
| 40 | SMPL | 35 | 0908F029 | TINS2 | K1008685-011 | LPRC05A-FD | |
| 41 | SMPL | 36 | 0908F030 | TINS2 | K1008685-012 | LPRC07A | |
| 42 | IB | 4 | 0908F031 | TINS2 | IB | | |
| 43 | IB | 5 | 0908F032 | TINS2 | KWG1009479-7 | IB | Butyltins |

NR

Sequence Name: C:\GC26\SEQUENCE\090810A.S

| | Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|---|
| all, ok | 44 | CCV | 6 | 0908F033 | TINS2 | TINS @ 50ppb \| OT4-28G \| KWG1 |
| | 45 | IB | 4 | 0908F034 | TINS2 | IB |
| | 46 | SMPL | 37 | 0908F035 | TINS2 | K1008685-013 \| LPRC07B |
| | 47 | SMPL | 38 | 0908F036 | TINS2 | K1008685-014 \| LPRC07D |
| | 48 | SMPL | 39 | 0908F037 | TINS2 | K1008685-015 \| LPRC06A |
| | 49 | SMPL | 40 | 0908F038 | TINS2 | K1008685-016 \| LPRC15A |
| | 50 | MS | 41 | 0908F039 | TINS2 | KWG1009460-1 \| K1008685-016MS |
| | 51 | DMS | 42 | 0908F040 | TINS2 | KWG1009460-2 \| K1008685-016DM |
| | 52 | SMPL | 43 | 0908F041 | TINS2 | K1008685-017 \| LPRC08A |
| | 53 | IB | 7 | 0908F042 | TINS2 | IB |
| | 54 | IB | 8 | 0908F043 | TINS2 | KWG1009479-9 \| IB \| Butyltins |
| | 55 | CCV | 9 | 0908F044 | TINS2 | TINS @ 50ppb \| OT4-28G \| KWG1 |
| | 56 | IB | 7 | 0908F045 | TINS2 | IB |
| | 57 | SMPL | 44 | 0908F046 | TINS2 | K1008685-018 \| LPRC09A |
| | 58 | SMPL | 45 | 0908F047 | TINS2 | K1008685-019 \| LPRC10A |
| | 59 | SMPL | 46 | 0908F048 | TINS2 | K1008685-020 \| LPRC12A |
| | 60 | SMPL | 47 | 0908F049 | TINS2 | KWG1009460-5 SRM @10X |
| | 61 | IB | 7 | 0908F050 | TINS2 | IB |
| | 62 | IB | 8 | 0908F051 | TINS2 | KWG1009479-11 \| IB \| Butyltin |
| | 63 | CCV | 9 | 0908F052 | TINS2 | TINS @ 50ppb \| OT4-28G \| KWG1 |
| | 64 | IB | 1 | 0908F053 | TINS2 | IB |
| | 65 | SMPL | 10 | 0908F054 | TINS2 | K1007457-003 \| LPR3-ARFT-Comp |
| | 66 | SMPL | 11 | 0908F055 | TINS2 | K1007457-004 \| LPR3-ARFT-Ind0 |
| | 67 | MS | 12 | 0908F056 | TINS2 | KWG1009283-1 \| K1007457-007MS |
| | 68 | DMS | 13 | 0908F057 | TINS2 | KWG1009283-2 \| K1007457-007DM |
| | 69 | SMPL | 14 | 0908F058 | TINS2 | K1007457-011 \| LPR4-ARFT-Ind0 |
| | 70 | IB | 1 | 0908F059 | TINS2 | IB |
| | 71 | IB | 2 | 0908F060 | TINS2 | KWG1009479-1 \| IB \| Butyltins |
| | 72 | CCV | 3 | 0908F061 | TINS2 | TINS @ 50ppb \| OT4-28G \| KWG1 |

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F002.D
**Lab ID:** KWG1009479-1
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/08/2010 22:46
**Date Quantitated:** 09/09/2010 07:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: MGGh

Secondary Review: AC 9/10/10

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F002.D\0908F002C.D
**Lab ID:** KWG1009479-1
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/08/2010 22:46
**Date Quantitated:** 09/09/2010 07:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: MGP

Secondary Review: 9/10/10

Printed: 09/09/2010 16:11:10
u:\Stealth\Crystal.rpt\except2.rpt

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F002.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F002.D\0908F002c.d | | | **Vial:** | 5 |
| **Acqu Date:** | 09/08/2010 22:46 | **Quant Date:** | 09/09/2010 07:53 | **Dilution:** | 1.0 |
| **Run Type:** | IB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009479-1 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 0.00 | | 0d | 0 | ' | 0.0000 | | | NA |
| | | | %Recovery = | | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

Final Conc. Units:

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | | | |
| Tri-n-butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |
| Di-n-butyltin Cation | | | 0d | 0d | 0.0000 | 0.0000 | | | |
| n-Butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F002.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\090810A\0908F002.D\FPD2B.CH
Acq On : 08 Sep 2010 10:46 pm Operator: CCotnam
Sample : KWG1009479-3 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009479\3-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:19 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

Target Compounds

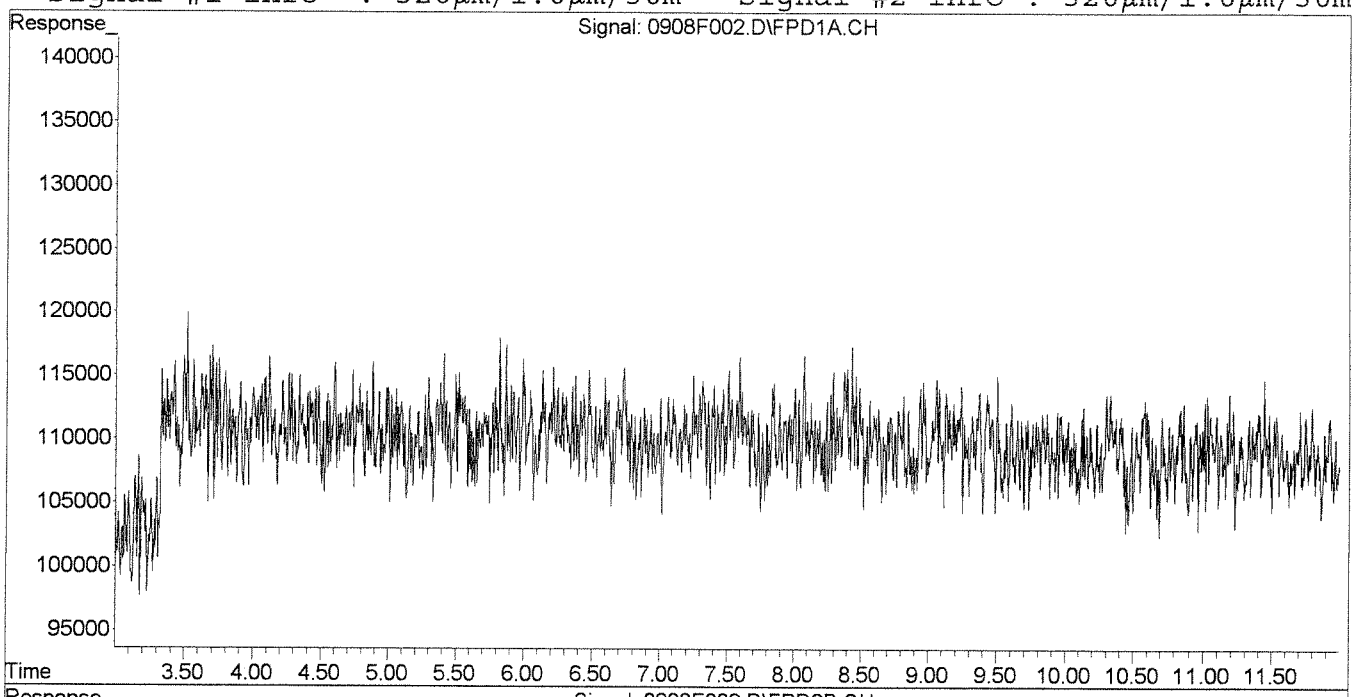
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

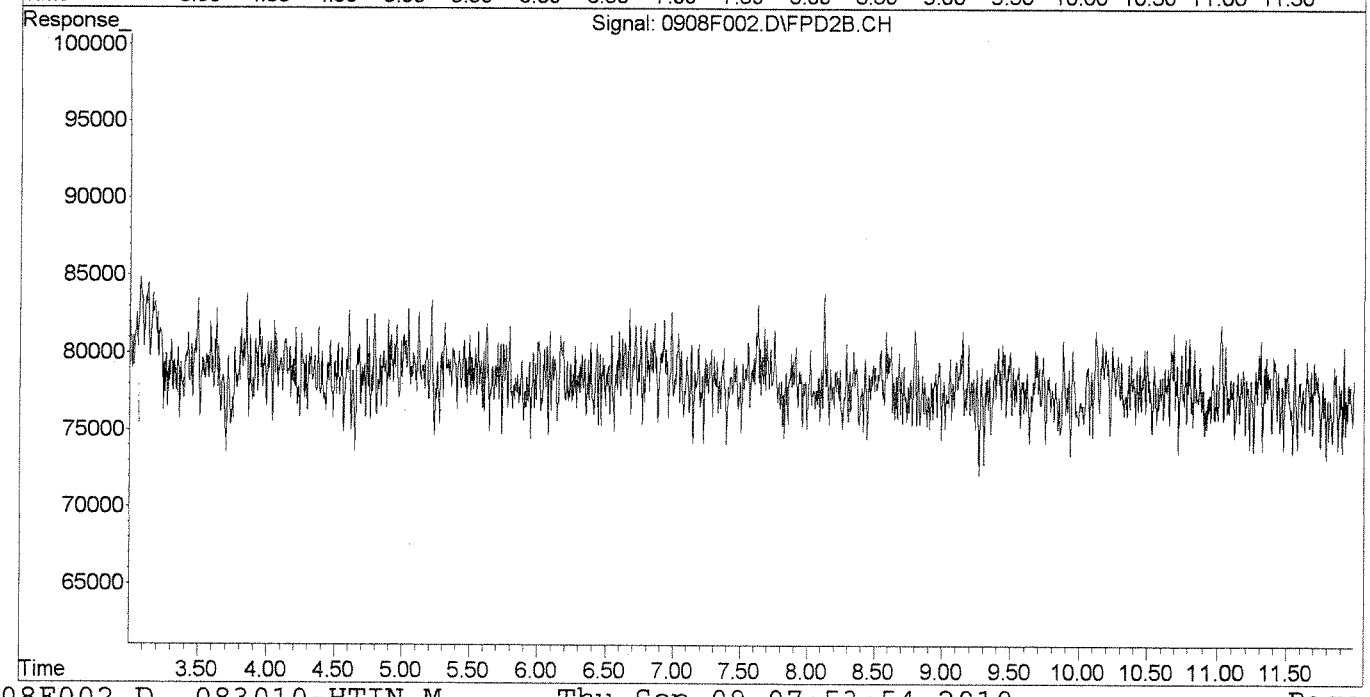
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F002.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\090810A\0908F002.D\FPD2B.CH
Acq On : 08 Sep 2010 10:46 pm Operator: CCotnam
Sample : KWG1009479-3 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009479\3-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:53 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F019.D
**Lab ID:** KWG1009479-3
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/09/2010 03:24
**Date Quantitated:** 09/09/2010 07:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: Ag 9/10/10

Printed: 09/09/2010 16:12:37
u:\Stealth\Crystal.rpt\except2.rpt

# *Exception Report*

**Data File:** J:\GC26\DATA\090810A\0908F019.D\0908F019C.D
**Lab ID:** KWG1009479-3
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/09/2010 03:24
**Date Quantitated:** 09/09/2010 07:53
**Batch ID:** KWG1009479
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/10/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/08/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009479 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\083010-HTIN. | **Calibration ID:** | CAL9814 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\090810A\0908F019.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\090810A\0908F019.D\0908F019c.d | | | **Vial:** | 5 |
| **Acqu Date:** | 09/09/2010 03:24 | **Quant Date:** | 09/09/2010 07:53 | **Dilution:** | 1.0 |
| **Run Type:** | IB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009479-3 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 0.00 | | 0 | 0 | | 0.0000 | | | NA |
| | | | %Recovery = | | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

**Final Conc. Units:**

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0d | 0.0000 | 0.0000 | | | |
| Tri-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | | | |
| Di-n-butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | | | |
| n-Butyltin Cation | | | 0 | 0d | 0.0000 | 0.0000 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F019.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\090810A\0908F019.D\FPD2B.CH
Acq On : 09 Sep 2010 3:24 am Operator: CCotnam
Sample : KWG1009479-5 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009479\5-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 09 07:09:25 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

Target Compounds

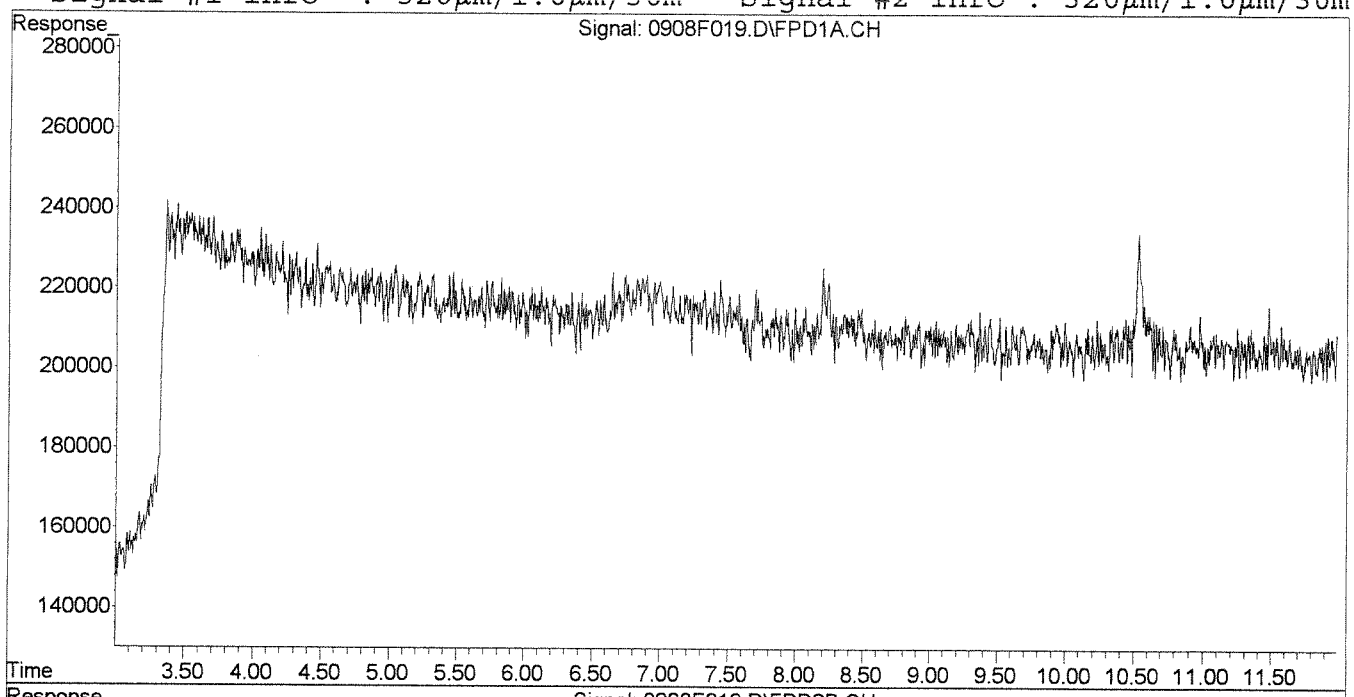
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

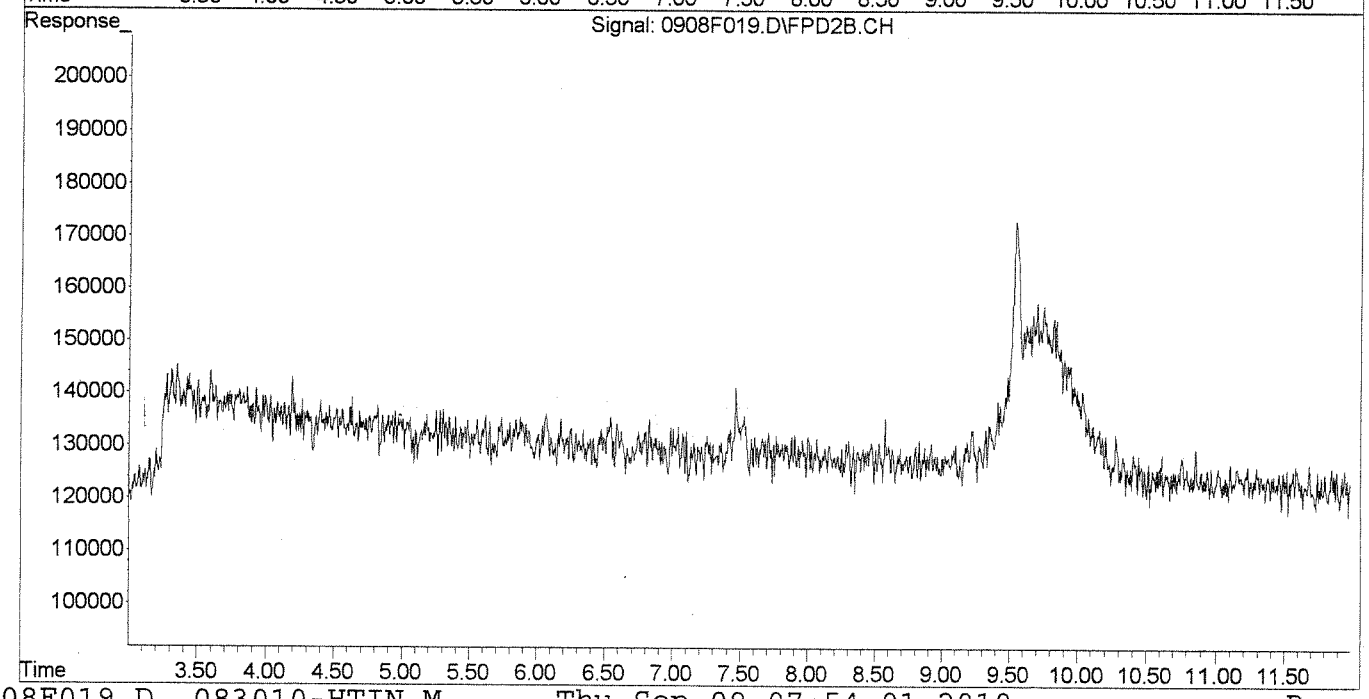
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\090810A\0908F019.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\090810A\0908F019.D\FPD2B.CH
Acq On : 09 Sep 2010 3:24 am Operator: CCotnam
Sample : KWG1009479-5 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009479\5-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 9 7:53 2010 Quant Results File: 083010-HTIN.RES

Quant Method : J:\GC26\METHODS\083010-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Mon Aug 30 16:06:15 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



Sequence Name: C:\GC26\SEQUENCE\091510C.S
Comment:
Operator: CCotnam
Data Path: C:\GC26\DATA\091510C\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

CAL 9871
Run # 46924

| | Line | Type | Vial | DataFile | Method | Sample Name | |
|---|---|---|---|---|---|---|---|
| | 1 | IB | 1 | 0915F001 | TINS2 | IB | |
| | 2 | IB | 2 | 0915F002 | TINS2 | KWG1009780-1 | IB \| Butyltins |
| ok, ok | 3 | CCV | 3 | 0915F003 | TINS2 | TINS @ 50ppb | OT4-28G \| KWG1 |
| | 4 | IB | 1 | 0915F004 | TINS2 | IB | ~~Run # 216~~ |
| | 5 | SMPL | 16 | 0915F005 | TINS2 | K1007457-003 | LPR3-ARFT-Comp @2x |
| | 6 | SMPL | 17 | 0915F006 | TINS2 | K1007457-004 | LPR3-ARFT-Ind0 @2x |
| | 7 | MS | 18 | 0915F007 | TINS2 | KWG1009283-1 | K1007457-007MS @2x |
| | 8 | DMS | 19 | 0915F008 | TINS2 | KWG1009283-2 | K1007457-007DM @2x |
| | 9 | SMPL | 20 | 0915F009 | TINS2 | K1007457-011 | LPR4-ARFT-Ind0 @2X |
| | 10 | IB | 1 | 0915F010 | TINS2 | IB | |
| | 11 | IB | 2 | 0915F011 | TINS2 | KWG1009780-3 | IB \| Butyltins |
| ok, ok | 12 | CCV | 3 | 0915F012 | TINS2 | TINS @ 50ppb | OT4-28G \| KWG1 |
| | 13 | IB | 1 | 0915F013 | TINS2 | IB | |
| | 14 | MB | 21 | 0915F014 | TINS2 | KWG1009567-4 | MB \| Butyltins |
| | 15 | LCS | 22 | 0915F015 | TINS2 | KWG1009567-3 | LCS \| Butyltin |
| | 16 | SMPL | 23 | 0915F016 | TINS2 | K1008775-001 | MBP1+2- Comp |
| | 17 | SMPL | 24 | 0915F017 | TINS2 | K1008775-002 | LA-5-Comp |
| | 18 | MS | 25 | 0915F018 | TINS2 | KWG1009567-1 | K1008775-002MS |
| | 19 | DMS | 26 | 0915F019 | TINS2 | KWG1009567-2 | K1008775-002DM |
| | 20 | SMPL | 27 | 0915F020 | TINS2 | K1008775-003 | BD-08 |
| | 21 | SMPL | 28 | 0915F021 | TINS2 | K1008857-001 | LPRC07C |
| | 22 | SMPL | 29 | 0915F022 | TINS2 | K1008857-002 | LPRC13A |
| | 23 | IB | 4 | 0915F023 | TINS2 | IB | |
| | 24 | IB | 5 | 0915F024 | TINS2 | KWG1009780-5 | IB \| Butyltins |
| ok, ok | 25 | CCV | 6 | 0915F025 | TINS2 | TINS @ 50ppb | OT4-28G \| KWG1 |
| | 26 | IB | 4 | 0915F026 | TINS2 | IB | |
| | 27 | SMPL | 30 | 0915F027 | TINS2 | K1008973-001 | SB-813 (0.5-2. |
| | 28 | SMPL | 31 | 0915F028 | TINS2 | K1008973-002 | SB-816 (2-4) |
| | 29 | SMPL | 32 | 0915F029 | TINS2 | K1008973-003 | SB-819 (0-0.5) |
| | 30 | SMPL | 33 | 0915F030 | TINS2 | K1008973-004 | SB-815 (0-0.5) |
| | 31 | SMPL | 34 | 0915F031 | TINS2 | K1008973-005 | SB-823 (4-6) – see also 50X |
| | 32 | SMPL | 35 | 0915F032 | TINS2 | KWG1009567-5 | SRM |
| | 33 | IB | 4 | 0915F033 | TINS2 | IB | |
| | 34 | IB | 5 | 0915F034 | TINS2 | KWG1009780-7 | IB \| Butyltins |
| ok, ok | 35 | CCV | 6 | 0915F035 | TINS2 | TINS @ 50ppb | OT4-28G \| KWG1 |
| | 36 | IB | 4 | 0915F036 | TINS2 | IB | |
| | 37 | MB | 36 | 0915F037 | TINS2 | KWG1009620-2 | MB \| Butyltins |
| | 38 | LCS | 37 | 0915F038 | TINS2 | KWG1009620-1 | LCS \| Butyltin |
| | 39 | DLCS | 38 | 0915F039 | TINS2 | KWG1009620-5 | DLCS \| Butylti |
| | 40 | SMPL | 39 | 0915F040 | TINS2 | K1007274-001 | LPR1-MACT-Ind1 |
| | 41 | SMPL | 40 | 0915F041 | TINS2 | K1007274-008 | LPR7-MAWB-Ind1 |
| | 42 | SMPL | 41 | 0915F042 | TINS2 | K1007274-009 | LPR7-MAWB-Comp |
| | 43 | SMPL | 42 | 0915F043 | TINS2 | K1007274-010 | LPR6-MAWB-Ind1 |

Sequence Name: C:\GC26\SEQUENCE\091510C.S

| Line | Type | Vial | DataFile | Method | Sample Name | | | |
|---|---|---|---|---|---|---|---|---|
| 44 | SMPL | 43 | 0915F044 | TINS2 | K1007274-011 | LPR1-MAWB-Ind1 | | |
| 45 | SMPL | 44 | 0915F045 | TINS2 | K1007274-012 | LPR2-MAWB-Ind1 | | |
| 46 | SMPL | 45 | 0915F046 | TINS2 | K1007274-013 | LPR8-MAWB-Comp | | |
| 47 | IB | 7 | 0915F047 | TINS2 | IB | | | |
| 48 | IB | 8 | 0915F048 | TINS2 | KWG1009780-9 | IB | Butyltins | |
| 49 | CCV | 9 | 0915F049 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 | |
| 50 | IB | 7 | 0915F050 | TINS2 | IB | | | |
| 51 | SMPL | 46 | 0915F051 | TINS2 | K1007274-014 | LPR8-MAWB-Comp | | |
| 52 | SMPL | 47 | 0915F052 | TINS2 | K1007274-015 | LPR8-MAWB-Comp | | |
| 53 | SMPL | 48 | 0915F053 | TINS2 | K1007274-016 | LPR4-MAWB-Comp | | |
| 54 | SMPL | 49 | 0915F054 | TINS2 | K1007274-017 | LPR5-MAWB-Comp | | |
| 55 | SMPL | 50 | 0915F055 | TINS2 | K1007274-018 | LPR5-MAWB-Comp | | |
| 56 | MS | 51 | 0915F056 | TINS2 | KWG1009620-4 | K1007274-018MS | | |
| 57 | SMPL | 52 | 0915F057 | TINS2 | K1007274-019 | LPR5-MAWB-Comp | | |
| 58 | SMPL | 53 | 0915F058 | TINS2 | K1007274-020 | LPR4-MAWB-Comp | | |
| 59 | SMPL | 54 | 0915F059 | TINS2 | KWG1009620-3 | SRM @10X | | |
| 60 | IB | 7 | 0915F060 | TINS2 | IB | | | |
| 61 | IB | 8 | 0915F061 | TINS2 | KWG1009780-11 | IB | Butyltin | |
| 62 | CCV | 9 | 0915F062 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 | |
| 63 | IB | 7 | 0915F063 | TINS2 | IB | | | |
| 64 | MB | 55 | 0915F064 | TINS2 | KWG1009746-4 | MB | Butyltins | |
| 65 | LCS | 56 | 0915F065 | TINS2 | KWG1009746-2 | LCS | Butyltin | |
| 66 | DLCS | 57 | 0915F066 | TINS2 | KWG1009746-3 | DLCS | Butylti | |
| 67 | SMPL | 58 | 0915F067 | TINS2 | K1007273-001 | LPR3-MAFT-Comp | | |
| 68 | SMPL | 59 | 0915F068 | TINS2 | K1007273-002 | LPR3-MAFT-Comp | | |
| 69 | SMPL | 60 | 0915F069 | TINS2 | K1007273-003 | LPR3-MAFT-Comp | | |
| 70 | SMPL | 61 | 0915F070 | TINS2 | K1007273-004 | LPR3-MAFT-Comp | | |
| 71 | SMPL | 62 | 0915F071 | TINS2 | K1007273-005 | LPR3-MAFT-Comp | | |
| 72 | SMPL | 63 | 0915F072 | TINS2 | K1007273-006 | LPR3-MAFT-Comp | | |
| 73 | SMPL | 64 | 0915F073 | TINS2 | K1007273-007 | LPR3-MAFT-Comp | | |
| 74 | IB | 10 | 0915F074 | TINS2 | IB | | | |
| 75 | IB | 11 | 0915F075 | TINS2 | KWG1009780-13 | IB | Butyltin | |
| 76 | CCV | 12 | 0915F076 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 | |
| 77 | IB | 10 | 0915F077 | TINS2 | IB | | | |
| 78 | SMPL | 65 | 0915F078 | TINS2 | K1007274-002 | LPR3-MAWB-Comp | | |
| 79 | SMPL | 66 | 0915F079 | TINS2 | K1007274-003 | LPR3-MAWB-Comp | | |
| 80 | SMPL | 67 | 0915F080 | TINS2 | K1007274-004 | LPR3-MAWB-Comp | | |
| 81 | SMPL | 68 | 0915F081 | TINS2 | K1007274-005 | LPR3-MAWB-Comp | | |
| 82 | SMPL | 69 | 0915F082 | TINS2 | K1007274-006 | LPR3-MAWB-Comp | | |
| 83 | SMPL | 70 | 0915F083 | TINS2 | K1007274-007 | LPR3-MAWB-Comp | | |
| 84 | SMPL | 71 | 0915F084 | TINS2 | K1007620-016 | LPR3-ARWB-Ind0 | | |
| 85 | SMPL | 72 | 0915F085 | TINS2 | K1007620-017 | LPR3-ARWB-Ind0 | | |
| 86 | IB | 10 | 0915F086 | TINS2 | IB | | | |
| 87 | IB | 11 | 0915F087 | TINS2 | KWG1009780-15 | IB | Butyltin | |
| 88 | CCV | 12 | 0915F088 | TINS2 | TINS @ 50ppb | OT4-28G | KWG1 | |
| 89 | IB | 10 | 0915F089 | TINS2 | IB | | | |
| 90 | SMPL | 73 | 0915F090 | TINS2 | K1007620-018 | LPR3-ARWB-Ind0 | | |
| 91 | SMPL | 74 | 0915F091 | TINS2 | K1007620-019 | LPR4-ARWB-Ind0 | | |
| 92 | SMPL | 75 | 0915F092 | TINS2 | K1007620-020 | LPR4-ARWB-Ind0 | | |
| 93 | SMPL | 76 | 0915F093 | TINS2 | K1007621-001 | LPR5-ARWB-Ind0 | | |
| 94 | SMPL | 77 | 0915F094 | TINS2 | K1007621-002 | LPR4-ARWB-Ind0 | | |
| 95 | MS | 78 | 0915F095 | TINS2 | KWG1009746-1 | K1007621-002MS | | |
| 96 | SMPL | 79 | 0915F096 | TINS2 | KWG1009746-5 | SRM @10X | | |

Sequence Name: C:\GC26\SEQUENCE\091510C.S

| Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|
| 97 | IB | 13 | 0915F097 | TINS2 | IB |
| 98 | IB | 14 | 0915F098 | TINS2 | KWG1009780-17 \| IB \| Butyltin |
| 99 | CCV | 15 | 0915F099 | TINS2 | TINS @ 50ppb \| OT4-28G \| KWG1 |

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F011.D
**Lab ID:** KWG1009780-3
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/15/2010 21:05
**Date Quantitated:** 09/16/2010 09:47
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F011.D\0915F011C.D
**Lab ID:** KWG1009780-3
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/15/2010 21:05
**Date Quantitated:** 09/16/2010 09:47
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible] 9/20/10

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/15/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F011.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F011.D\0915F011c.d | | | **Vial:** | 2 |
| **Acqu Date:** | 09/15/2010 21:05 | **Quant Date:** | 09/16/2010 09:47 | **Dilution:** | 1.0 |
| **Run Type:** | IB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009780-3 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 0.00 | | 0d | 0 | | 0.0000 | | | NA |
| | | | %Recovery = | | NA | NA | Limits = | 18-95 | |

## *Target Compounds*

Final Conc. Units:

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | | | |
| Tri-n-butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |
| Di-n-butyltin Cation | | | 0 | 0 | 0.0000 | 0.0000 | | | |
| n-Butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC26\DATA\091510C\0915F011.D\FPD1A.CH Vial: 2
Signal #2 : J:\GC26\DATA\091510C\0915F011.D\FPD2B.CH
Acq On : 15 Sep 2010 9:05 pm Operator: CCotnam
Sample : KWG1009780-3 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009780\3-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:38 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

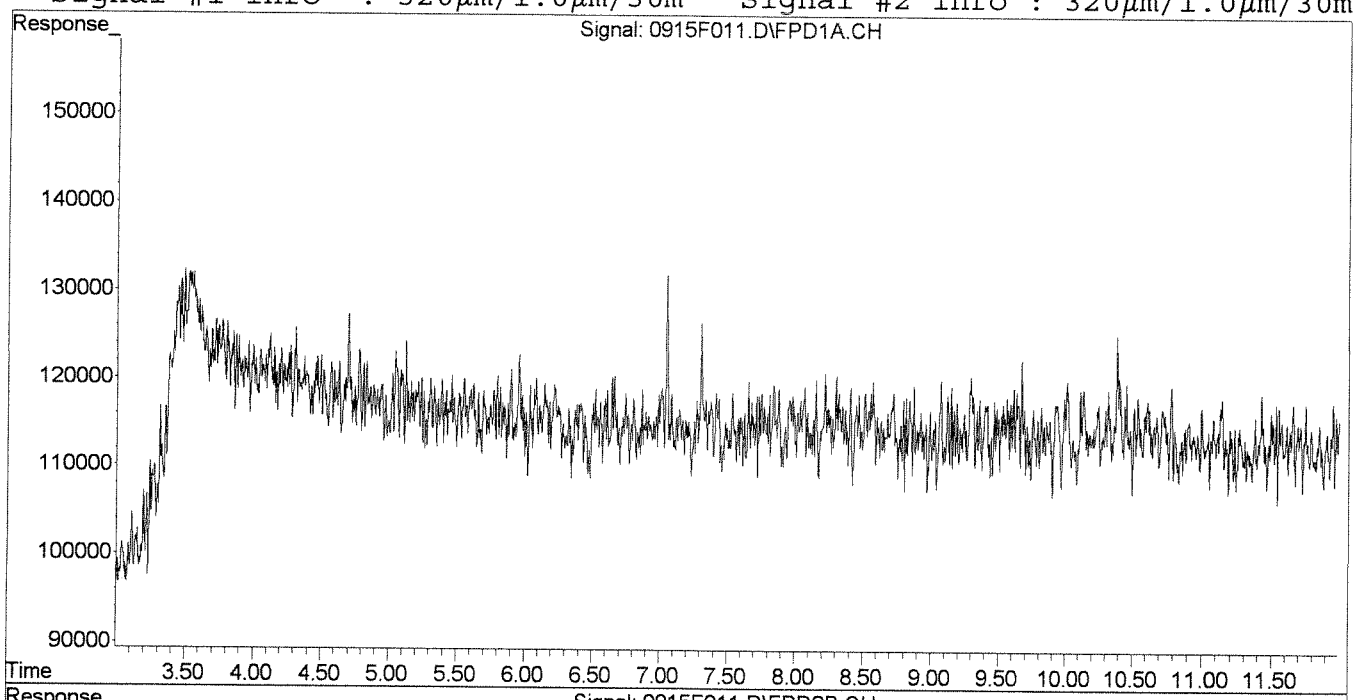
Target Compounds

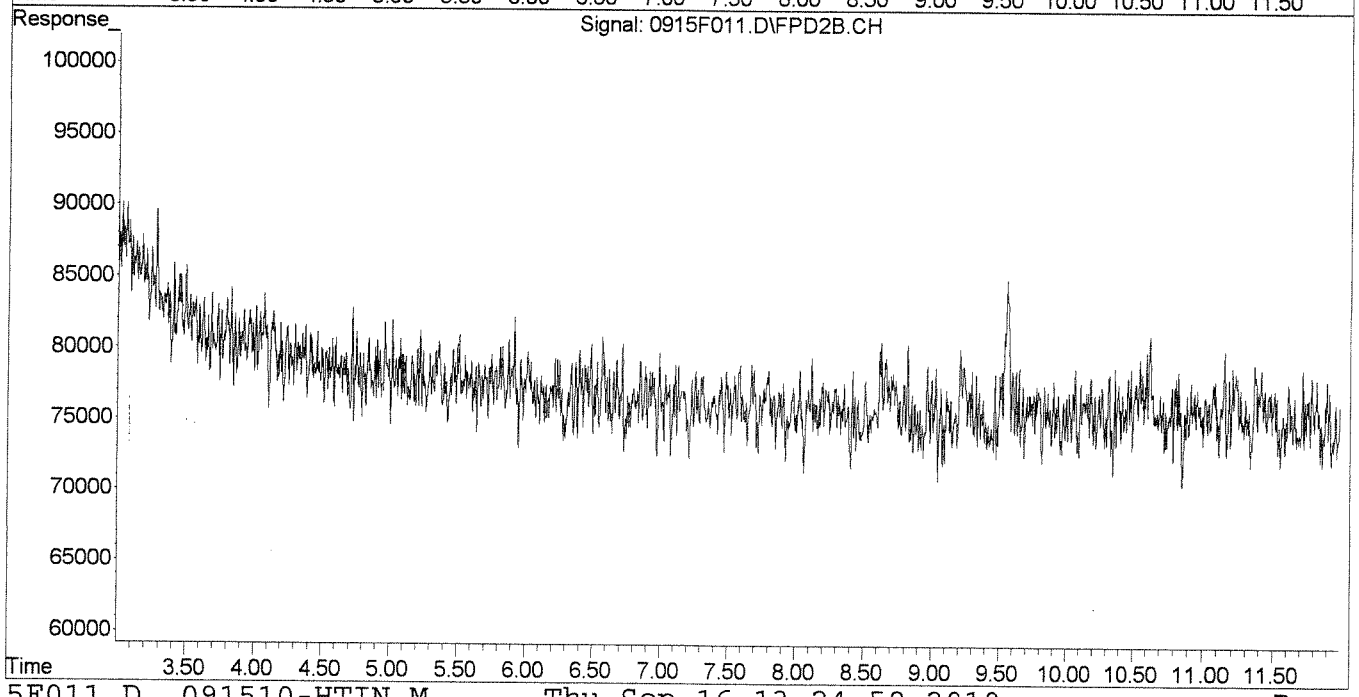
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F011.D\FPD1A.CH Vial: 2
Signal #2 : J:\GC26\DATA\091510C\0915F011.D\FPD2B.CH
Acq On : 15 Sep 2010 9:05 pm Operator: CCotnam
Sample : KWG1009780-3 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009780\3-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 9:47 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F024.D
**Lab ID:** KWG1009780-5
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/16/2010 00:40
**Date Quantitated:** 09/16/2010 09:47
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: [illegible]

Secondary Review: [illegible]

# *Exception Report*

**Data File:** J:\GC26\DATA\091510C\0915F024.D\0915F024C.D
**Lab ID:** KWG1009780-5
**RunType:** IB
**Matrix:** MISC

**Date Acquired:** 09/16/2010 00:40
**Date Quantitated:** 09/16/2010 09:47
**Batch ID:** KWG1009780
**Analysis Method:** Krone
**MethodJoinID:** MJ133

## *Sample Exceptions*

| Exception Categories | Result | Low Limit | High Limit | Pass | Fail |
|---|---|---|---|---|---|
| ICAL Analyte Recovery | NA | NA | NA | x | |
| Second Source ICAL Verification | NA | NA | NA | x | |
| Analyte Co-elution | NA | NA | NA | x | |
| Below Lowest ICAL Level | NA | NA | NA | x | |
| Above Highest ICAL Level | NA | NA | NA | x | |
| Enviroquant/Stealth Calibration Check | NA | NA | NA | x | |

Primary Review: _____

Secondary Review: _____

# Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| **Bottle ID:** | | **Tier:** | | **Matrix:** | MISC |
| **Prod Code:** | Butyltins BUTYL | **Collect Date:** | | **Receive Date:** | 09/15/2010 |

| | | | | | |
|---|---|---|---|---|---|
| **Analysis Lot:** | KWG1009780 | **Prep Lot:** | | **Report Group:** | |
| **Analysis Method:** | Krone | **Prep Method:** | | | |
| **Prep Ref:** | | **Prep Date:** | | | |

| | | | |
|---|---|---|---|
| **Quant Method:** | J:\GC26\METHODS\091510-HTIN. | **Calibration ID:** | CAL9871 |
| **Title:** | | | |
| **MB Ref:** | | **Method ID:** | MJ133 |
| | | **Quant based on Method** | |

| | | | | | |
|---|---|---|---|---|---|
| **Data File #1:** | J:\GC26\DATA\091510C\0915F024.D | | | **Instrument:** | GC26 |
| **Data File #2:** | J:\GC26\DATA\091510C\0915F024.D\0915F024c.d | | | **Vial:** | 5 |
| **Acqu Date:** | 09/16/2010 00:40 | **Quant Date:** | 09/16/2010 09:47 | **Dilution:** | 1.0 |
| **Run Type:** | IB | | | **Soln Conc. Units:** | ng/mL |
| **Lab ID:** | KWG1009780-5 | | | | |
| **Signal #1:** | RTX-1 | **Signal #2:** | RTX-35 | | |

## *Surrogate Compounds*

| Parameter Name | RT #1 | RT #2 | Resp #1 | Respe #2 | ng/mL #1 | ng/mL #2 | | | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tri-n-propyltin | 0.00 | | 0 | 0 | | 0.0000 | | | NA |
| | | | **%Recovery =** | | NA | NA | **Limits =** | 18-95 | |

## *Target Compounds*

**Final Conc. Units:**

| Parameter Name | RT #1 | RT #2 | Resp #1 | Resp #2 | ng/mL #1 | ng/mL #2 | ug/Kg #1 | ug/Kg #2 | Rpt |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | | | 0 | 0 | 0.0000 | 0.0000 | | | |
| Tri-n-butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |
| Di-n-butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |
| n-Butyltin Cation | | | 0d | 0 | 0.0000 | 0.0000 | | | |

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Signal #1 : J:\GC26\DATA\091510C\0915F024.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\091510C\0915F024.D\FPD2B.CH
Acq On : 16 Sep 2010 12:40 am Operator: CCotnam
Sample : KWG1009780-5 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009780\5-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 08:53:43 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Initial Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|

System Monitoring Compounds

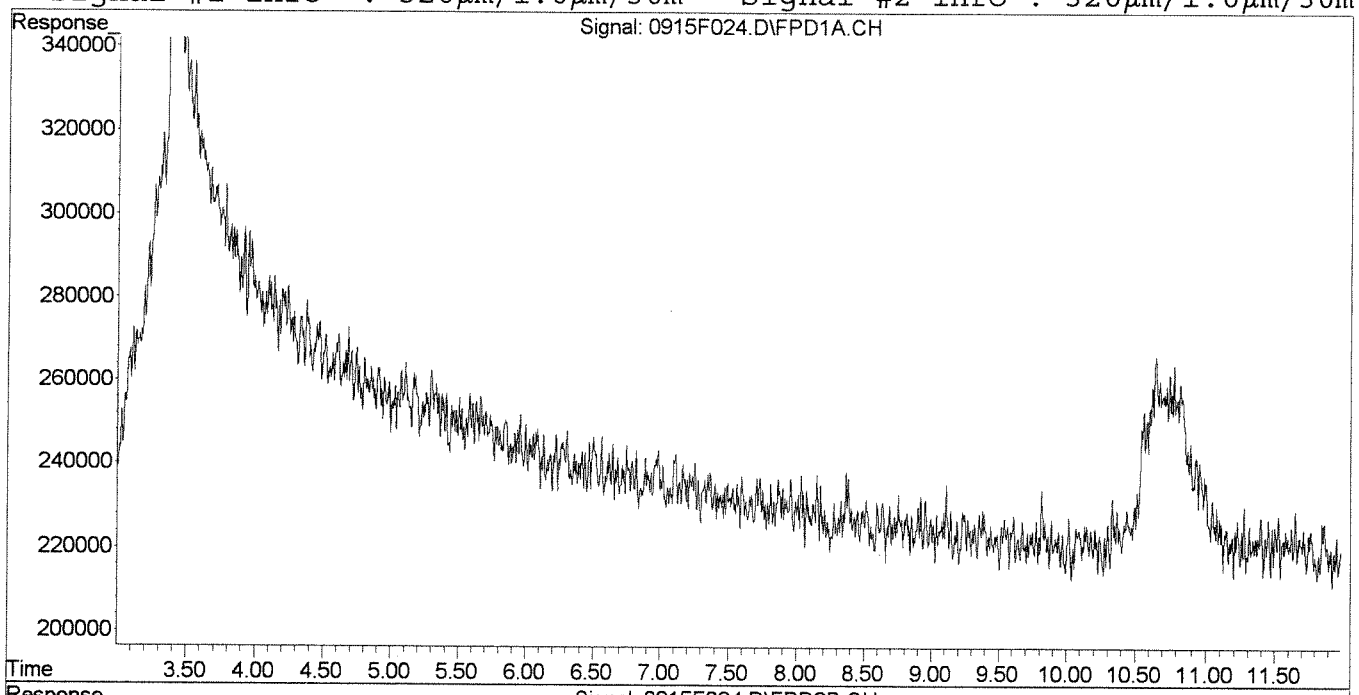
Target Compounds

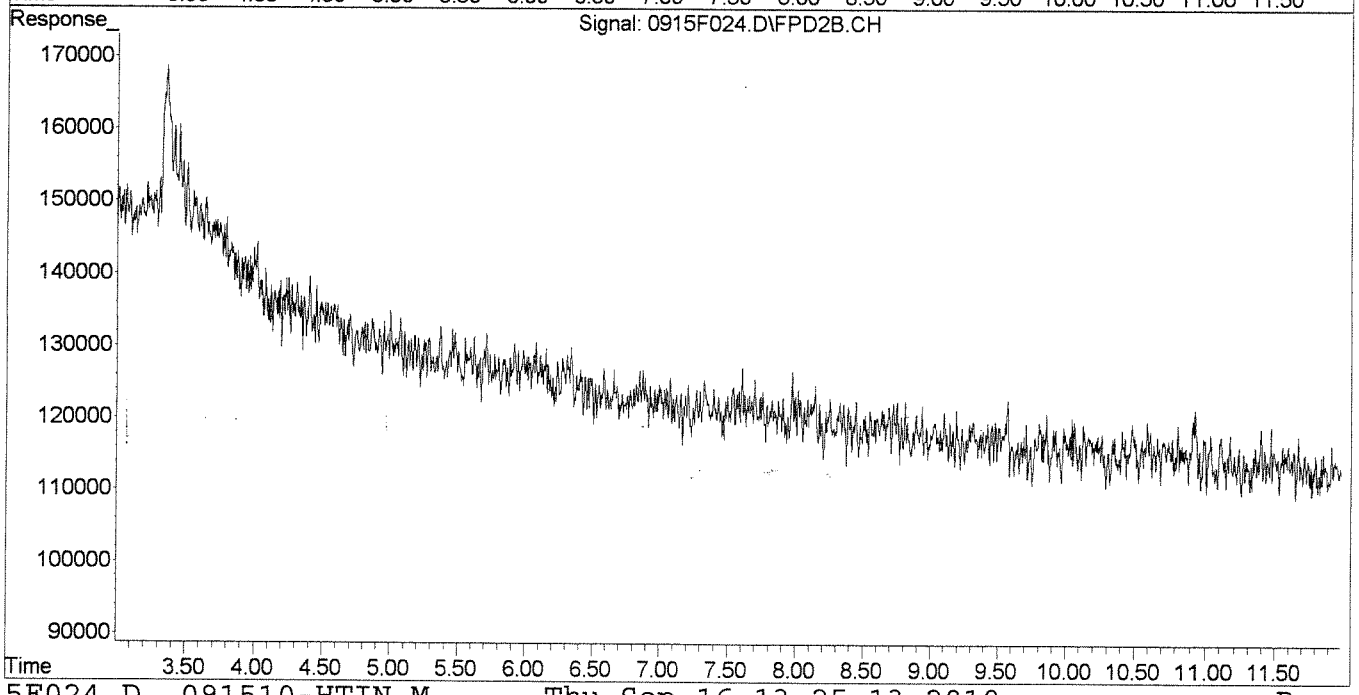
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC26\DATA\091510C\0915F024.D\FPD1A.CH Vial: 5
Signal #2 : J:\GC26\DATA\091510C\0915F024.D\FPD2B.CH
Acq On : 16 Sep 2010 12:40 am Operator: CCotnam
Sample : KWG1009780-5 | IB | Butyltins BUTYLTINS Inst : GC26
Misc : SEMIVOA GC\W1009780\5-IB.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 16 9:47 2010 Quant Results File: 091510-HTIN.RES

Quant Method : J:\GC26\METHODS\091510-HTIN.M (RTE Integrator)
Title : Hexylated Butyltins CAL9536
Last Update : Wed Sep 15 17:08:48 2010
Response via : Multiple Level Calibration
DataAcq Meth : TINS2.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



**COLUMBIA ANALYTICAL SERVICES, INC.**

| | | | |
|---|---|---|---|
| **Client:** | Windward Environmental, LLC | **Service Request No.:** | K1008857 |
| **Project:** | Passaic RI/FS Sediment | **Date Received:** | 08/18/10 |
| **Sample Matrix:** | Sediment/Water | | |

**CASE NARRATIVE ADDENDUM**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

**Addendum Comments**

The Total Phosphorus results and QC for sample LPRC07C-RB were inadvertently omitted in the original report and are included herein.

**REVISED**
**5:39 pm, Jan 07, 2011**

**Approved by** LAA **Date** 1/6/11

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** Windward Environmental, LLC
**Project Name :** Passaic RI/FS Sediment
**Project Number :** Task 18.8.1
**Sample Matrix :** WATER

**Service Request :** K1008857
**Date Collected :** 08/16/10
**Date Received :** 08/18/10

Phosphorus, Total

Prep Method : Method
Analysis Method : 365.3
Test Notes :

Units : mg/L
Basis : NA

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| LPRC07C-RB | K1008857-003 | 0.010 | 0.004 | 1 | 8/27/2010 | 08/30/10 | 0.012 | |
| Method Blank | K1008857-MB | 0.010 | 0.004 | 1 | 8/27/2010 | 08/30/10 | 0.010 | U |

Report By:MKANALY

Printed: 12/27/2010 2:17:41PM

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/27/10 |
| | | **Date Analyzed :** | 08/30/10 |

Duplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Batch QC | Units : | mg/L |
| Lab Code : | K1008747-003DUP | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3 | 0.020 | 0.603 | 0.656 | 0.630 | 8 | |

Report By:MKANALY

Printed: 12/27/2010 2:17:41PM

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/27/10 |
| | | **Date Analyzed :** | 08/30/10 |

Matrix Spike/Duplicate Matrix Spike Summary

| | | | | |
|---|---|---|---|---|
| Sample Name : | Batch QC | | Units : | mg/L |
| Lab Code : | K1008747-003MS | K1008747-003DMS | Basis : | NA |
| Test Notes : | | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Spike Recovery MS | Spike Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3 | 0.10 | 1.00 | 2.00 | 0.603 | 1.85 | 2.83 | 125 | 112 | 50-144 | 11 | |

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | Windward Environmental, LLC | **Service Request :** | K1008857 |
| **Project Name :** | Passaic RI/FS Sediment | **Date Collected :** | NA |
| **Project Number :** | Task 18.8.1 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | 08/27/10 |
| | | **Date Analyzed :** | 08/30/10 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/L |
| Lab Code : | K1008857-LCS | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Phosphorus, Total | Method | 365.3 | 3.23 | 3.61 | 112 | 88-113 | |

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Phosphorus, Total
365.3
Units: mg/L

## CONTINUING CALIBRATION VERIFICATION (CCV)

| | Date Analyzed | True Value | Measured Value | Percent Recovery |
|---|---|---|---|---|
| CCV1 Result | 8/30/2010 | 0.500 | 0.501 | 100 |
| CCV2 Result | 8/30/2010 | 0.500 | 0.503 | 101 |
| CCV3 Result | 8/30/2010 | 0.500 | 0.510 | 102 |
| CCV4 Result | 8/30/2010 | 0.500 | 0.503 | 101 |
| CCV5 Result | 8/30/2010 | 0.500 | 0.501 | 100 |
| CCV6 Result | 8/30/2010 | 0.500 | 0.500 | 100 |

Printed: 12/27/2010 2:18:34PM

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** Windward Environmental, LLC
**Project :** Passaic RI/FS Sediment

**Service Request :** K1008857
**Date Collected :** NA
**Date Received :** NA

Phosphorus, Total
365.3
Units: mg/L

## CONTINUING CALIBRATION BLANK (CCB)

| | Date Analyzed | MRL | Blank Value |
|---|---|---|---|
| CCB1 Result | 8/30/2010 | 0.010 | 0.010 U |
| CCB2 Result | 8/30/2010 | 0.010 | 0.010 U |
| CCB3 Result | 8/30/2010 | 0.010 | 0.010 U |
| CCB4 Result | 8/30/2010 | 0.010 | 0.010 U |
| CCB5 Result | 8/30/2010 | 0.010 | 0.010 U |
| CCB6 Result | 8/30/2010 | 0.010 | 0.010 U |

Printed: 12/27/2010 2:18:34PM