# FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

| | | | |
|---|---|---|---|
| LABORATORY NAME | ALS Environmental | | |
| CITY/STATE | Salt Lake City, UT 84123 | | |
| CASE NO. | 45299 | SDG NO.: | MF9M21 |
| SDG NOs. TO FOLLOW | N/A | | |
| MOD. REF. No. | N/A | | |
| CONTRACT NO. | EPW09036 | | |
| SOW NO. | ISM01.3 | | |

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

| | PAGE NOs FROM | PAGE NOs TO | CHECK LAB | CHECK REGION |
|---|---|---|---|---|
| 1. Inventory Sheet (DC-2) | 1 | 2 | ✓ | |
| 2. SDG Narrative | 3 | 5 | ✓ | |
| 3. Sample Log-In Sheet (DC-1) | 6 | 7 | ✓ | |
| 4. Traffic Report/Chain of Custody Record(s) | 8 | 10 | ✓ | |
| 5. Cover Page | 11 | 11 | ✓ | |
| **Inorganic Analysis** | | | | |
| 6. Data Sheet (Form I-IN) | 12 | 51 | ✓ | |
| 7. Initial & Continuing Calibration Verification (Form IIA-IN) | 52 | 56 | ✓ | |
| 8. Blanks (Form III-IN) | 57 | 59 | ✓ | |
| 9. ICP-AES Interference Check Sample(Form IVA-IN) | 60 | 60 | ✓ | |
| 10. ICP-MS Interference Check Sample(Form IVB-IN) | 61 | 61 | ✓ | |
| 11. Matrix Spike Sample Recovery(Form VA-IN) | 62 | 63 | ✓ | |
| 12. Post-Digestion Spike Sample Recovery(Form VB-IN) | 64 | 64 | ✓ | |
| 13. Duplicates (Form VI-IN) | 65 | 66 | ✓ | |
| 14. Laboratory Control Sample (Form VII-IN) | 67 | 69 | ✓ | |
| 15. ICP-AES and ICP-MS Serial Dilutions (Form VIII-IN) | 70 | 71 | ✓ | |
| 16. Method Detection Limit (Annually) (Form IX-IN) | 72 | 74 | ✓ | |
| 17. ICP-AES Interelement Correction Factors (Quarterly) Form XA-IN) | 75 | 75 | ✓ | |
| 18. ICP-AES Interelement Correction Factors (Annually) Form XB-IN) | 76 | 77 | ✓ | |
| 19. Internal Standard Association (Form X1-IN) | 78 | 78 | ✓ | |
| 20. Preparation Log (Form XII-IN) | 79 | 82 | ✓ | |
| 21. Analysis Run Log (Form XIII-IN) | 83 | 88 | ✓ | |

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FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

| | PAGE NOs FROM | PAGE NOs TO | CHECK LAB | CHECK REGION |
|---|---|---|---|---|
| 22. ICP-MS Tune (Form XIV-IN) | 89 | 89 | ✓ | |
| 23. ICP-MS Internal Standards Relative Intensity Summary (Form XV-IN) | 90 | 93 | ✓ | |
| 24. Initial Calibration (Form XVI - IN) | 94 | 101 | ✓ | |
| 25. ICP AES Raw Data | 102 | 189 | ✓ | |
| 26. ICP-MS Raw Data | 190 | 299 | ✓ | |
| 27. Mercury Raw Dta | 300 | 304 | ✓ | |
| 28. Cyanide Raw Data | n/a | | ✓ | |
| 29. Preparation Logs Raw Data | 305 | 308 | ✓ | |
| 30. Percent Solids Determination Log | 309 | 309 | ✓ | |
| 31. USEPA Shipping/Receiving Documents | | | | |
| Airbill (No. of Shipments 2 ) | 310 | 311 | ✓ | |
| Sample Tags | 312 | 312 | ✓ | |
| Sample Log-In Sheet (Lab) | NA | | ✓ | |
| 32. Misc. Shipping/Receiving Records (list all individual records) | | | | |
| Communication Logs | NA | | ✓ | |
| ALS SDG TR Cover Sheet | 313 | 314 | ✓ | |
| | | | ✓ | |
| 33. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list) | | | | |
| ALS CoC | 315 | 324 | ✓ | |
| 34. Internal Original Sample Prep & Analysis Records (describe or list) | | | | |
| Prep Records | 325 | 349 | ✓ | |
| Analysis Records | 350 | 425 | ✓ | |
| PE Instructions | n/a | | | |
| Description | NA | | ✓ | |
| 35. Other Records (describe or list) | | | | |
| Communication Logs | NA | | ✓ | |
| E-mail Communications | n/a | | ✓ | |
| | | | ✓ | |

36. Comments: n/a

Completed by:
(CLP Lab) Desiree Hill (Signature) | Desiree Hill / Doc. Ctrl. (Print Name & Title) | 6/23/15 (Date)

Audited By:
(USEPA) (Signature) | (Print Name & Title) | (Date)

960 W. LeVoy Drive
Salt Lake City, UT 84123
**T:** +1 801 266 7700
**F:** +1 801 268 9992
**www.alsglobal.com**

## SDG Administrative Narrative

**Contract:** EPW09036

**Case:** 45299

**SDG:** MF9M21

**WO No(s):** 1515559

**Cooler # and Temperatures of each (upon receipt)**

| | | | | |
|---|---|---|---|---|
| Cooler Number C15- | n/a | Arrival temperature was | 4 | °C |
| Cooler Number C15- | n/a | Arrival temperature was | 4 | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |
| Cooler Number C15- | | Arrival temperature was | | °C |

06/23/2015
DH

**Communications:**

The sample receipt for this Case/SDG is compliant with EPA CLP SOW requirements.

**Comments:**

None

Signature: Dennis Hill
Document Control Officer

Date: 06/23/2015

# SDG Narrative

| | | | |
|---|---|---|---|
| Case: | 45299 | Contract #: | EPW-09-036 |
| SDG: | MF9M21 | ALS Set ID #: | 1515559 |

**General Information:** The twenty samples in this SDG were analyzed by methodologies contained in ISM01.3. All concentration, analytical, and method qualifiers are defined in the SOW.

**Target Analytes:** Target analytes for this SDG are aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc.

**Holding Times:** All samples were prepared and analyzed within method required holding times.

**Initial and Continuing Calibration:** All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

**Interference Check Sample Analysis:** Results for the interference check samples met method acceptance criteria.

**Preparation Blanks:** The absolute values of all analyte concentrations in the preparation blanks were lower than the Contract Required Quantitation Limits.

**Laboratory Control Sample Analysis:** Results for the analysis of the LCSs met method acceptance criteria.

**Matrix Spike Analysis:** All matrix spike recoveries met method acceptance criteria with the exception of antimony.

**Matrix Duplicate Analysis:** All matrix duplicate results met method acceptance criteria with the exceptions of aluminum, iron, magnesium, arsenic, barium, vanadium and zinc.

**Serial Dilution:** All serial dilution results met method acceptance criteria with the exception of zinc.

**Miscellaneous Comments:** All calibration data is linear, please see raw data.

**Example Equations:**

Method 3050B: $C \times \frac{Vf}{W \times S} \times DF \div 1000 = Concentration\ (mg/Kg)$

Method 7471B: $C \times \frac{1}{W \times S} \times DF \times 0.1 = Concentration\ (mg/Kg)$

Where,
C = Instrument value in µg/L (The average of all replicate integrations).
Vf = Final digestion volume (mL)
W = Initial digestion Weight (g)
DF = Dilution Factor
S = % Solids/100

# SAMPLE LOG-IN SHEET
## FORM DC-1

| | |
|---|---|
| Lab Name ALS Environmental | Page 1 of 1 |
| Received By (Print Name) Meredith Edwards | Log-In Date 6/3/2015 |
| Received By (Signature) Meredith Edwards | |
| Case Number 45299 | Sample Delivery Group No. MF9M21 |
| | Mod. Ref. No. n/a |

Remarks:

1. Custody Seal (s) — Present/Absent* / Intact/Broken*
2. Custody Seal Nos. — n/a / 1
3. Traffic Report/ Chain-of Custody Records or Packing Lists — Present/Absent*
4. Airbill — Airbill/Sticker Present/Absent*
5. Airbill No. — 7783 2705 5048 / n/a
6. Sample Tags — Present/Absent* / Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
7. Sample Condition — Intact/Broken*/Leaking*
8. Cooler Temperature Indicator Bottle — Present/Absent*
9. Cooler Temperature — 4°
10. Does information on TR/COCs and sample tags agree? — Yes/No*
11. Date Received at Laboratory — 6/3/2015
12. Time Received — 10:07

| | EPA Sample # | Aqueous/ Water Sample pH | Corresponding Sample Tag # | Corresponding Assigned Lab # | Remarks: Condition of Sample Shipment, etc. |
|---|---|---|---|---|---|
| 1 | MF9M21 | n/a | n/a | 1515559 001 | PES/MS/Hg Sol |
| 2 | 22 | | | 002 | |
| 3 | 23 | | | 003 | |
| 4 | 24 | | | 004 | |
| 5 | 25 | | | 005 | |
| 6 | 26 | | | 006 | |
| 7 | 27 | | | 007,008,009 | MS/MD |
| 8 | 31 | | | 013 | |
| 9 | 32 | | | 014 | |
| 10 | 33 | | | 015 | |
| 11 | 35 | | | 017 | |
| 12 | 36 | | | | |
| 13 | 38 | | | 019 | |
| 14 | 39 | | | 020 | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |

MF 6/3/2015

| Sample Transfer | |
|---|---|
| Fraction PES/MS/Hg | Fraction |
| Area # RM-1 | Area # |
| By MF | By |
| On 6/3/2015 | On |

* Contact SMO and attach record of resolution

| | |
|---|---|
| Reviewed By Roxanne Allsa | Logbook No. Not Applicable |
| Date 6/4/15 | Logbook Page No. Not Applicable |

# SAMPLE LOG-IN SHEET
## FORM DC-1

| | |
|---|---|
| Lab Name: ALS Environmental | Page 1 of 1 |
| Received By (Print Name): Meredith Edwards | Log-In Date: 6/3/2015 |
| Received By (Signature): Meredith Edwards | |
| Case Number: 45299 | Sample Delivery Group No.: MFM21 |
| | Mod. Ref. No.: n/a |

| Remarks: | | | EPA Sample # | Aqueous/ Water Sample pH | Corresponding Sample Tag # | Corresponding Assigned Lab # | Remarks: Condition of Sample Shipment, etc. |
|---|---|---|---|---|---|---|---|
| 1. Custody Seal (s) | Present/Absent* Intact/Broken* | 1 | MF9M28 | n/a | n/a | 1515559010 | PES/MS/Hg 8011 |
| | | 2 | 29 | | | 011 | |
| 2. Custody Seal Nos. | n/a | 3 | 30 | | | 012 | |
| | | 4 | 34 | | | 016 | |
| 3. Traffic Report/ Chain-of Custody Records or Packing Lists | Present/Absent* | 5 | 37 | | | 018 | |
| | | 6 | 40 | | | 021 | |
| 4. Airbill | Airbill/Sticker Present/Absent* | 7 | 41 | | | 022 | |
| 5. Airbill No. | 7737310155451 | 8 | 42 | | | | |
| | n/a | 9 | 43 | | | | |
| 6. Sample Tags | Present/Absent* | 10 | 44 | | | | |
| Sample Tag Numbers | Listed/Not Listed on Chain-of-Custody | 11 | 45 | | | | |
| 7. Sample Condition | Intact/Broken*/Leaking* | 12 | | | | | |
| 8. Cooler Temperature Indicator Bottle | Present/Absent* | 13 | | | | | |
| 9. Cooler Temperature | 4° | 14 | | | | | |
| 10. Does information on TR/COCs and sample tags agree? | Yes/No* | 15 | | | MK 6/3/2015 | | |
| 11. Date Received at Laboratory | 6/3/2015 | 16 | | | | | |
| 12. Time Received | 10:07 | 17 | | | | | |
| Sample Transfer | | 18 | | | | | |
| Fraction: PES/MS/Hg | Fraction: | 19 | | | | | |
| Area #: R331 | Area #: MK 6/3/2015 | 20 | | | | | |
| By: MK | By: | 21 | | | | | |
| On: 6/3/2015 | On: | 22 | | | | | |

* Contact SMO and attach record of resolution

| | |
|---|---|
| Reviewed By: Roxanne Olson | Logbook No.: Not Applicable |
| Date: 6/4/15 | Logbook Page No.: Not Applicable |

1515559

USEPA CLP COC (LAB COPY)

DateShipped: 6/2/2015
CarrierName: FedEx
AirbillNo: 773737055648

CHAIN OF CUSTODY RECORD

MF9M21

Case #: 45299
Cooler #:

No: 6-060215-171757-0079

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Meredith Edwards
Lab Phone: 801-266-7700

| Sample Identifier | CLP Sample No. | Matrix/Sampler | Coll. Method | Analysis/Turnaround (Days) | Tag/Preservative/Bottles | Location | Collection Date/Time | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|
| WO-011-002-06-51 | MF9M21 | Soil/ START | Composite | TM + Hg(21) | 1427 (Ice) (1) | 011 | 06/02/2015 08:15 | |
| WO-011-002-12-51 | MF9M22 | Soil/ START | Composite | TM + Hg(21) | 1432 (Ice) (1) | 011 | 06/02/2015 08:20 | |
| WO-011-002-24-51 | MF9M23 | Soil/ START | Composite | TM + Hg(21) | 1437 (Ice) (1) | 011 | 06/02/2015 08:25 | |
| WO-011-002-24-52 | MF9M24 | Soil/ START | Composite | TM + Hg(21) | 1442 (Ice) (1) | 011 | 06/02/2015 08:30 | |
| WO-011-001-06-51 | MF9M25 | Soil/ START | Composite | TM + Hg(21) | 1447 (Ice) (1) | 011 | 06/02/2015 08:55 | |
| WO-011-001-12-51 | MF9M26 | Soil/ START | Composite | TM + Hg(21) | 1452 (Ice) (1) | 011 | 06/02/2015 09:00 | |
| WO-011-001-24-51 | MF9M27 | Soil/ START | Composite | TM + Hg(21) | 1457 (Ice) (1) | 011 | 06/02/2015 09:05 | |
| WO-011-004-06-51 | MF9M31 | Soil/ START | Composite | TM + Hg(21) | 1477 (Ice) (1) | 011 | 06/02/2015 09:50 | |
| WO-011-004-12-51 | MF9M32 | Soil/ START | Composite | TM + Hg(21) | 1482 (Ice) (1) | 011 | 06/02/2015 09:55 | |
| WO-011-004-24-51 | MF9M33 | Soil/ START | Composite | TM + Hg(21) | 1487 (Ice) (1) | 011 | 06/02/2015 10:00 | |

| | |
|---|---|
| Sample(s) to be used for Lab QC: WO-011-001-24-51 Tag 1457 | **Shipment for Case Complete? N** |
| | **Samples Transferred From Chain of Custody #** |
| Analysis Key: TM + Hg=CLP TM + Hg | |

| Items/Reason | Relinquished by (Signature and Organization) | Date/Time | Received by (Signature and Organization) | Date/Time | Sample Condition Upon Receipt |
|---|---|---|---|---|---|
| Samples/Analysis | [signature] Weston | 6/2/15 @ 2100 | FedEx | 6/2/15 @ 2100 | |
| | FedEx | 6/3/2015 10:07 | Meredith Edwards DATAPL | 6/3/2015 10:07 | good |
| | | | | | |
| | | | | | |

**USEPA CLP COC (LAB COPY)**
DateShipped: 6/2/2015
CarrierName: FedEx
AirbillNo: 773737055648

**CHAIN OF CUSTODY RECORD**

MF9M24

Case #: 45299
Cooler #:

**No: 6-060215-171757-0079**
Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Meredith Edwards
Lab Phone: 801-266-7700

| Sample Identifier | CLP Sample No. | Matrix/Sampler | Coll. Method | Analysis/Turnaround (Days) | Tag/Preservative/Bottles | Location | Collection Date/Time | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|
| WO-002-001-00-52 | MF9M35 | Soil/ START | Composite | TM + Hg(21) | 1497 (Ice) (1) | 002 | 06/02/2015 11:25 | |
| WO-002-002-00-51 | MF9M36 | Soil/ START | Composite | TM + Hg(21) | 1502 (Ice) (1) | 002 | 06/02/2015 11:45 | |
| WO-002-004-00-51 | MF9M38 | Soil/ START | Composite | TM + Hg(21) | 1512 (Ice) (1) | 002 | 06/02/2015 13:05 | |
| WO-002-004-00-52 | MF9M39 | Soil/ START | Composite | TM + Hg(21) | 1517 (Ice) (1) | 002 | 06/02/2015 13:10 | |

| | |
|---|---|
| Sample(s) to be used for Lab QC: WO-002-002-00-51 Tag 1502 | **Shipment for Case Complete? N** |
| | **Samples Transferred From Chain of Custody #** |
| Analysis Key: TM + Hg=CLP TM + Hg | |

| Items/Reason | Relinquished by (Signature and Organization) | Date/Time | Received by (Signature and Organization) | Date/Time | Sample Condition Upon Receipt |
|---|---|---|---|---|---|
| Samples/Analysis | Weston | 6/2/15 @ 2100 | Fedex | 6/2/15 @ 2100 | |
| | FedEx | 6/3/2015/10:07 | Meredith Schwarz DATA | 6/3/2015/10:07 | good |
| | | | | | |

**USEPA CLP COC (LAB COPY)**
DateShipped: 6/2/2015
CarrierName: FedEx
AirbillNo: 773736955451

**CHAIN OF CUSTODY RECORD** MF9M21

Case #: 45299
Cooler #:

**No: 6-060215-185503-0085**
Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Meredith Edwards
Lab Phone: 801-266-7700

| Sample Identifier | CLP Sample No. | Matrix/Sampler | Coll. Method | Analysis/Turnaround (Days) | Tag/Preservative/Bottles | Location | Collection Date/Time | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|
| WO-011-003-06-51 | MF9M28 | Soil/ START | Composite | TM + Hg(21) | 1462 (Ice) (1) | 011 | 06/02/2015 09:10 | |
| WO-011-003-12-51 | MF9M29 | Soil/ START | Composite | TM + Hg(21) | 1467 (Ice) (1) | 011 | 06/02/2015 09:15 | |
| WO-011-003-24-51 | MF9M30 | Soil/ START | Composite | TM + Hg(21) | 1472 (Ice) (1) | 011 | 06/02/2015 09:20 | |
| WO-002-001-00-51 | MF9M34 | Soil/ START | Composite | TM + Hg(21) | 1492 (Ice) (1) | 011 | 06/02/2015 11:20 | |
| WO-002-003-00-51 | MF9M37 | Soil/ START | Composite | TM + Hg(21) | 1507 (Ice) (1) | 002 | 06/02/2015 13:30 | |
| WO-002-003-06-51 | MF9M40 | Soil/ START | Composite | TM + Hg(21) | 1522 (Ice) (1) | 002 | 06/02/2015 13:40 | |
| WO-002-003-12-51 | MF9M41 | Soil/ START | Composite | TM + Hg(21) | 1527 (Ice) (1) | 002 | 06/02/2015 13:45 | Spa-Final Sample |
| WO-002-001-06-51 | MF9M42 | Soil/ START | Composite | TM + Hg(21) | 1532 (Ice) (1) | 002 | 06/02/2015 14:30 | |
| WO-002-001-12-51 | MF9M43 | Soil/ START | Composite | TM + Hg(21) | 1537 (Ice) (1) | 002 | 06/02/2015 14:35 | |
| WO-002-002-06-51 | MF9M44 | Soil/ START | Composite | TM + Hg(21) | 1542 (Ice) (1) | 002 | 06/02/2015 16:30 | |

| | |
|---|---|
| Special Instructions: | **Shipment for Case Complete? N** |
| | **Samples Transferred From Chain of Custody #** |
| Analysis Key: TM + Hg=CLP TM + Hg | |

| Items/Reason | Relinquished by (Signature and Organization) | Date/Time | Received by (Signature and Organization) | Date/Time | Sample Condition Upon Receipt |
|---|---|---|---|---|---|
| 11/samples | [signature] Weston | 6/2/15 2100 | Fedex | 6/2/15 2100 | |
| | FedEx | 6/3/2015 10:07 | Meredith Edwards DATAC | 6/3/2015 10:07 | good |
| | | | | | |
| | | | | | |

USEPA - CLP
COVER PAGE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

SOW No.: ISM01.3

| EPA Sample No. | Lab Sample ID |
|---|---|
| MF9M21 | 1515559001 |
| MF9M22 | 1515559002 |
| MF9M23 | 1515559003 |
| MF9M24 | 1515559004 |
| MF9M25 | 1515559005 |
| MF9M26 | 1515559006 |
| MF9M27 | 1515559007 |
| MF9M27D | 1515559009 |
| MF9M27S | 1515559008 |
| MF9M28 | 1515559010 |
| MF9M29 | 1515559011 |
| MF9M30 | 1515559012 |
| MF9M31 | 1515559013 |
| MF9M32 | 1515559014 |
| MF9M33 | 1515559015 |
| MF9M34 | 1515559016 |
| MF9M35 | 1515559017 |
| MF9M37 | 1515559018 |
| MF9M38 | 1515559019 |
| MF9M39 | 1515559020 |
| MF9M40 | 1515559021 |
| MF9M41 | 1515559022 |

| | | ICP-AES | ICP-MS |
|---|---|---|---|
| Were ICP-AES and ICP-MS Interelement corrections applied? | (Yes/No) | Yes | Yes |
| Were ICP-AES and ICP-MS background corrections applied? | (Yes/No) | Yes | No |
| If yes - were raw data generated before application of background corrections? | (Yes/No) | No | |

The laboratory did not receive any instructions with this SDG to modify the SOW standard laboratory sample preparation procedures (e.g., subsampling). To aid in the determination of data usability with respect to project decisions, any modifications performed are described below.

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Data Package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Neil Edwards

Date: 06/23/2015 Title: Chemist

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M21

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559001

% Solids: 82.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3310 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2050 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 6820 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 619 | | * | P |
| 7439-96-5 | Manganese | 157 | | | P |
| 7439-97-6 | Mercury | 0.0031 | J | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 571 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 16.8 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M21

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559001

% Solids: 82.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.095 | J | DN | MS |
| 7440-38-2 | Arsenic | 6.5 | | D* | MS |
| 7440-39-3 | Barium | 45.6 | | D* | MS |
| 7440-41-7 | Beryllium | 0.57 | | D | MS |
| 7440-43-9 | Cadmium | 0.050 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 25.9 | | D | MS |
| 7440-48-4 | Cobalt | 4.5 | | D | MS |
| 7440-50-8 | Copper | 8.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 17.3 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 7.7 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.4 | U | D | MS |
| 7440-22-4 | Silver | 0.035 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.076 | J | D | MS |
| 7440-62-2 | Vanadium | 20.1 | | D* | MS |
| 7440-66-6 | Zinc | 20.5 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M22

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559002

% Solids: 87.8 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3090 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1540 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 6780 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 392 | J | * | P |
| 7439-96-5 | Manganese | 161 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 464 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 15.6 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M22

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559002

% Solids: 87.8 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.052 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.0 | | D* | MS |
| 7440-39-3 | Barium | 45.0 | | D* | MS |
| 7440-41-7 | Beryllium | 0.35 | J | D | MS |
| 7440-43-9 | Cadmium | 0.47 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 10 | | D | MS |
| 7440-48-4 | Cobalt | 2.7 | | D | MS |
| 7440-50-8 | Copper | 5.9 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 5.7 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 5.8 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.3 | U | D | MS |
| 7440-22-4 | Silver | 0.034 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.081 | J | D | MS |
| 7440-62-2 | Vanadium | 15.3 | | D* | MS |
| 7440-66-6 | Zinc | 11.5 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M23

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559003

% Solids: 88.2 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3330 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 372 | J | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 5210 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 300 | J | * | P |
| 7439-96-5 | Manganese | 23.1 | | | P |
| 7439-97-6 | Mercury | 0.098 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 460 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 15.7 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M23

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559003

% Solids: 88.2 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.037 | J | DN | MS |
| 7440-38-2 | Arsenic | 0.99 | | D* | MS |
| 7440-39-3 | Barium | 29.7 | | D* | MS |
| 7440-41-7 | Beryllium | 0.35 | J | D | MS |
| 7440-43-9 | Cadmium | 0.39 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 8.3 | | D | MS |
| 7440-48-4 | Cobalt | 1.6 | | D | MS |
| 7440-50-8 | Copper | 4.7 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 2.6 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 4.2 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 1.9 | U | D | MS |
| 7440-22-4 | Silver | 0.019 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.062 | J | D | MS |
| 7440-62-2 | Vanadium | 12.0 | | D* | MS |
| 7440-66-6 | Zinc | 10.7 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M24

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559004

% Solids: 86.6 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4870 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 587 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 8490 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 486 | J | * | P |
| 7439-96-5 | Manganese | 57.5 | | | P |
| 7439-97-6 | Mercury | 0.10 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 618 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 17.9 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M24

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559004

% Solids: 86.6 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.035 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.7 | | D* | MS |
| 7440-39-3 | Barium | 41.1 | | D* | MS |
| 7440-41-7 | Beryllium | 0.35 | J | D | MS |
| 7440-43-9 | Cadmium | 0.44 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 10.6 | | D | MS |
| 7440-48-4 | Cobalt | 2.2 | | D | MS |
| 7440-50-8 | Copper | 5.5 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 4.6 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 6.6 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.2 | U | D | MS |
| 7440-22-4 | Silver | 0.028 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.084 | J | D | MS |
| 7440-62-2 | Vanadium | 17.7 | | D* | MS |
| 7440-66-6 | Zinc | 13.9 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M25

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559005

% Solids: 83.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5470 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2860 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 9500 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 835 | | * | P |
| 7439-96-5 | Manganese | 227 | | | P |
| 7439-97-6 | Mercury | 0.0023 | J | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 760 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 31.3 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M25

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559005

% Solids: 83.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.024 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.2 | | D* | MS |
| 7440-39-3 | Barium | 48.1 | | D* | MS |
| 7440-41-7 | Beryllium | 0.35 | J | D | MS |
| 7440-43-9 | Cadmium | 0.031 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 9.0 | | D | MS |
| 7440-48-4 | Cobalt | 2.0 | | D | MS |
| 7440-50-8 | Copper | 4.9 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 6.4 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 4.9 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 0.30 | J | D | MS |
| 7440-22-4 | Silver | 0.023 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.068 | J | D | MS |
| 7440-62-2 | Vanadium | 14.6 | | D* | MS |
| 7440-66-6 | Zinc | 19.0 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M26

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559006

% Solids: 86.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 7500 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 6470 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 12200 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 951 | | * | P |
| 7439-96-5 | Manganese | 134 | | | P |
| 7439-97-6 | Mercury | 0.0037 | J | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 739 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 55.3 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M26

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559006

% Solids: 86.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.027 | J | DN | MS |
| 7440-38-2 | Arsenic | 2.9 | | D* | MS |
| 7440-39-3 | Barium | 109 | | D* | MS |
| 7440-41-7 | Beryllium | 0.76 | | D | MS |
| 7440-43-9 | Cadmium | 0.57 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 24.0 | | D | MS |
| 7440-48-4 | Cobalt | 5.2 | | D | MS |
| 7440-50-8 | Copper | 9.9 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 9.5 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 14.7 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.8 | U | D | MS |
| 7440-22-4 | Silver | 0.049 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.18 | J | D | MS |
| 7440-62-2 | Vanadium | 36.6 | | D* | MS |
| 7440-66-6 | Zinc | 21.9 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M27

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559007

% Solids: 86.5 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6930 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1520 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 10300 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 939 | | * | P |
| 7439-96-5 | Manganese | 79.7 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 642 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 46.3 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M27

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559007

% Solids: 86.5 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.019 | J | DN | MS |
| 7440-38-2 | Arsenic | 2.1 | | D* | MS |
| 7440-39-3 | Barium | 78.6 | | D* | MS |
| 7440-41-7 | Beryllium | 0.70 | | D | MS |
| 7440-43-9 | Cadmium | 0.40 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 18.2 | | D | MS |
| 7440-48-4 | Cobalt | 5.2 | | D | MS |
| 7440-50-8 | Copper | 6.6 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 7.9 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 10.9 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.0 | U | D | MS |
| 7440-22-4 | Silver | 0.028 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.12 | J | D | MS |
| 7440-62-2 | Vanadium | 23.7 | | D* | MS |
| 7440-66-6 | Zinc | 15.4 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M28

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559010

% Solids: 85.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 10300 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2580 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 16100 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 1400 | | * | P |
| 7439-96-5 | Manganese | 102 | | | P |
| 7439-97-6 | Mercury | 0.10 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 1100 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 68.9 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M28

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559010

% Solids: 85.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.17 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.9 | | D* | MS |
| 7440-39-3 | Barium | 62.5 | | D* | MS |
| 7440-41-7 | Beryllium | 0.57 | | D | MS |
| 7440-43-9 | Cadmium | 0.50 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 14.9 | | D | MS |
| 7440-48-4 | Cobalt | 4.2 | | D | MS |
| 7440-50-8 | Copper | 6.7 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 15.4 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 8.7 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 0.31 | J | D | MS |
| 7440-22-4 | Silver | 0.038 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.15 | J | D | MS |
| 7440-62-2 | Vanadium | 22.5 | | D* | MS |
| 7440-66-6 | Zinc | 22.5 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M29

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559011

% Solids: 85.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 8400 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2970 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 13500 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 1220 | | * | P |
| 7439-96-5 | Manganese | 219 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 743 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 87.0 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M29

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559011

% Solids: 85.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.068 | J | DN | MS |
| 7440-38-2 | Arsenic | 2.1 | | D* | MS |
| 7440-39-3 | Barium | 96.1 | | D* | MS |
| 7440-41-7 | Beryllium | 0.85 | | D | MS |
| 7440-43-9 | Cadmium | 0.42 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 23.4 | | D | MS |
| 7440-48-4 | Cobalt | 5.2 | | D | MS |
| 7440-50-8 | Copper | 11.2 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 15.1 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 13.6 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.1 | U | D | MS |
| 7440-22-4 | Silver | 0.042 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.18 | J | D | MS |
| 7440-62-2 | Vanadium | 31.7 | | D* | MS |
| 7440-66-6 | Zinc | 24.1 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M30

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559012

% Solids: 83.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 9990 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2660 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 17900 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 1470 | | * | P |
| 7439-96-5 | Manganese | 323 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 729 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 102 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M30

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559012

% Solids: 83.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.052 | J | DN | MS |
| 7440-38-2 | Arsenic | 3.7 | | D* | MS |
| 7440-39-3 | Barium | 180 | | D* | MS |
| 7440-41-7 | Beryllium | 1.2 | | D | MS |
| 7440-43-9 | Cadmium | 0.46 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 29.7 | | D | MS |
| 7440-48-4 | Cobalt | 8.5 | | D | MS |
| 7440-50-8 | Copper | 9.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 6.4 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 17.2 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.3 | U | D | MS |
| 7440-22-4 | Silver | 0.045 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.22 | J | D | MS |
| 7440-62-2 | Vanadium | 41.3 | | D* | MS |
| 7440-66-6 | Zinc | 24.8 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M31

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559013

% Solids: 84.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6110 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 5130 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 9340 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 965 | | * | P |
| 7439-96-5 | Manganese | 169 | | | P |
| 7439-97-6 | Mercury | 0.0046 | J | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 823 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 28.6 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M31

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559013

% Solids: 84.7 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.047 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.5 | | D* | MS |
| 7440-39-3 | Barium | 69.3 | | D* | MS |
| 7440-41-7 | Beryllium | 0.43 | J | D | MS |
| 7440-43-9 | Cadmium | 0.50 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 17.7 | | D | MS |
| 7440-48-4 | Cobalt | 3.3 | | D | MS |
| 7440-50-8 | Copper | 8.0 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 15.0 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 9.3 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 0.38 | J | D | MS |
| 7440-22-4 | Silver | 0.040 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.14 | J | D | MS |
| 7440-62-2 | Vanadium | 27.2 | | D* | MS |
| 7440-66-6 | Zinc | 19.6 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M32

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559014

% Solids: 84.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 12700 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2700 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 18100 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 1350 | | * | P |
| 7439-96-5 | Manganese | 179 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 1220 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 47.1 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M32

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559014

% Solids: 84.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.036 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.6 | | D* | MS |
| 7440-39-3 | Barium | 88.4 | | D* | MS |
| 7440-41-7 | Beryllium | 0.62 | | D | MS |
| 7440-43-9 | Cadmium | 0.019 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 14.8 | | D | MS |
| 7440-48-4 | Cobalt | 6.3 | | D | MS |
| 7440-50-8 | Copper | 8.6 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 16.2 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 8.9 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 0.40 | J | D | MS |
| 7440-22-4 | Silver | 0.045 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.12 | J | D | MS |
| 7440-62-2 | Vanadium | 22.6 | | D* | MS |
| 7440-66-6 | Zinc | 18.8 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M33

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559015

% Solids: 87.8 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5260 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1540 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 10000 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 657 | | * | P |
| 7439-96-5 | Manganese | 105 | | | P |
| 7439-97-6 | Mercury | 0.10 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 563 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 26.8 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M33

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559015

% Solids: 87.8 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.033 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.5 | | D* | MS |
| 7440-39-3 | Barium | 53.7 | | D* | MS |
| 7440-41-7 | Beryllium | 0.43 | J | D | MS |
| 7440-43-9 | Cadmium | 0.54 | U | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 11.7 | | D | MS |
| 7440-48-4 | Cobalt | 3.4 | | D | MS |
| 7440-50-8 | Copper | 5.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 8.0 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 7.4 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.7 | U | D | MS |
| 7440-22-4 | Silver | 0.027 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.090 | J | D | MS |
| 7440-62-2 | Vanadium | 17.7 | | D* | MS |
| 7440-66-6 | Zinc | 12.9 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M34

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559016

% Solids: 80.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2220 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1120 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 3410 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 279 | J | * | P |
| 7439-96-5 | Manganese | 210 | | | P |
| 7439-97-6 | Mercury | 0.0028 | J | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 378 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 11.7 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M34

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559016

% Solids: 80.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.038 | J | DN | MS |
| 7440-38-2 | Arsenic | 0.98 | | D* | MS |
| 7440-39-3 | Barium | 32.4 | | D* | MS |
| 7440-41-7 | Beryllium | 0.18 | J | D | MS |
| 7440-43-9 | Cadmium | 0.13 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 5.3 | | D | MS |
| 7440-48-4 | Cobalt | 2.8 | | D | MS |
| 7440-50-8 | Copper | 10.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 15.5 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.0 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.5 | U | D | MS |
| 7440-22-4 | Silver | 0.020 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.046 | J | D | MS |
| 7440-62-2 | Vanadium | 7.6 | | D* | MS |
| 7440-66-6 | Zinc | 36.8 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M35

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559017

% Solids: 81.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2120 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1120 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 3450 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 284 | J | * | P |
| 7439-96-5 | Manganese | 208 | | | P |
| 7439-97-6 | Mercury | 0.12 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 372 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 10.5 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MF9M35

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559017

% Solids: 81.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.032 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.0 | | D* | MS |
| 7440-39-3 | Barium | 32.0 | | D* | MS |
| 7440-41-7 | Beryllium | 0.19 | J | D | MS |
| 7440-43-9 | Cadmium | 0.12 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 5.6 | | D | MS |
| 7440-48-4 | Cobalt | 3.3 | | D | MS |
| 7440-50-8 | Copper | 9.7 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 16.4 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.2 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.3 | U | D | MS |
| 7440-22-4 | Silver | 0.019 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.049 | J | D | MS |
| 7440-62-2 | Vanadium | 8.0 | | D* | MS |
| 7440-66-6 | Zinc | 40.3 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M37

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559018

% Solids: 86.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1790 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 2220 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 3280 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 322 | J | * | P |
| 7439-96-5 | Manganese | 239 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 357 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 11.1 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MF9M37

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559018

% Solids: 86.1 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.035 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.3 | | D* | MS |
| 7440-39-3 | Barium | 48.1 | | D* | MS |
| 7440-41-7 | Beryllium | 0.17 | J | D | MS |
| 7440-43-9 | Cadmium | 0.23 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 5.6 | | D | MS |
| 7440-48-4 | Cobalt | 2.3 | | D | MS |
| 7440-50-8 | Copper | 11.0 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 15.1 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.2 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.6 | U | D | MS |
| 7440-22-4 | Silver | 0.018 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.048 | J | D | MS |
| 7440-62-2 | Vanadium | 7.7 | | D* | MS |
| 7440-66-6 | Zinc | 56.5 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M38

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559019

% Solids: 78.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2200 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 1880 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 3090 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 301 | J | * | P |
| 7439-96-5 | Manganese | 135 | | | P |
| 7439-97-6 | Mercury | 0.12 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 321 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 12.5 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M38

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559019

% Solids: 78.4 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.039 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.3 | | D* | MS |
| 7440-39-3 | Barium | 31.9 | | D* | MS |
| 7440-41-7 | Beryllium | 0.17 | J | D | MS |
| 7440-43-9 | Cadmium | 0.095 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 5.5 | | D | MS |
| 7440-48-4 | Cobalt | 3.0 | | D | MS |
| 7440-50-8 | Copper | 16.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 16.5 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.3 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.7 | U | D | MS |
| 7440-22-4 | Silver | 0.016 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.055 | J | D | MS |
| 7440-62-2 | Vanadium | 8.7 | | D* | MS |
| 7440-66-6 | Zinc | 40.3 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M39

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559020

% Solids: 81.9 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3150 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 13800 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 5310 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 2020 | | * | P |
| 7439-96-5 | Manganese | 244 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 530 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 32.0 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M39

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559020

% Solids: 81.9 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.042 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.4 | | D* | MS |
| 7440-39-3 | Barium | 31.2 | | D* | MS |
| 7440-41-7 | Beryllium | 0.18 | J | D | MS |
| 7440-43-9 | Cadmium | 0.044 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 5.5 | | D | MS |
| 7440-48-4 | Cobalt | 2.8 | | D | MS |
| 7440-50-8 | Copper | 17.0 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 8.3 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.0 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.8 | U | D | MS |
| 7440-22-4 | Silver | 0.015 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.051 | J | D | MS |
| 7440-62-2 | Vanadium | 9.6 | | D* | MS |
| 7440-66-6 | Zinc | 19.6 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MF9M40

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559021

% Solids: 87.6 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2810 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 4510 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 4190 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 612 | | * | P |
| 7439-96-5 | Manganese | 237 | | | P |
| 7439-97-6 | Mercury | 0.11 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 493 | | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 15.8 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M40

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559021

% Solids: 87.6 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.069 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.6 | | D* | MS |
| 7440-39-3 | Barium | 39.9 | | D* | MS |
| 7440-41-7 | Beryllium | 0.20 | J | D | MS |
| 7440-43-9 | Cadmium | 0.13 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 6.1 | | D | MS |
| 7440-48-4 | Cobalt | 2.3 | | D | MS |
| 7440-50-8 | Copper | 11.4 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 11.9 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.6 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.0 | U | D | MS |
| 7440-22-4 | Silver | 0.028 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.053 | J | D | MS |
| 7440-62-2 | Vanadium | 8.8 | | D* | MS |
| 7440-66-6 | Zinc | 29.1 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
| | | | | | |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M41

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559022

% Solids: 86.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2770 | | * | P |
| 7440-36-0 | Antimony | | | | |
| 7440-38-2 | Arsenic | | | | |
| 7440-39-3 | Barium | | | | |
| 7440-41-7 | Beryllium | | | | |
| 7440-43-9 | Cadmium | | | | |
| 7440-70-2 | Calcium | 753 | | | P |
| 7440-47-3 | Chromium | | | | |
| 7440-48-4 | Cobalt | | | | |
| 7440-50-8 | Copper | | | | |
| 7439-89-6 | Iron | 6070 | | * | P |
| 7439-92-1 | Lead | | | | |
| 7439-95-4 | Magnesium | 237 | J | * | P |
| 7439-96-5 | Manganese | 217 | | | P |
| 7439-97-6 | Mercury | 0.10 | U | | CV |
| 7440-02-0 | Nickel | | | | |
| 7440-09-7 | Potassium | 369 | J | | P |
| 7782-49-2 | Selenium | | | | |
| 7440-22-4 | Silver | | | | |
| 7440-23-5 | Sodium | 15.5 | J | | P |
| 7440-28-0 | Thallium | | | | |
| 7440-62-2 | Vanadium | | | | |
| 7440-66-6 | Zinc | | | | |
| 57-12-5 | Cyanide | | | | |
| | | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: No

Comments:

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF9M41

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil Lab Sample ID: 1515559022

% Solids: 86.3 Date Received: 06/03/2015

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | | | |
| 7440-36-0 | Antimony | 0.034 | J | DN | MS |
| 7440-38-2 | Arsenic | 1.4 | | D* | MS |
| 7440-39-3 | Barium | 33.1 | | D* | MS |
| 7440-41-7 | Beryllium | 0.19 | J | D | MS |
| 7440-43-9 | Cadmium | 0.027 | J | D | MS |
| 7440-70-2 | Calcium | | | | |
| 7440-47-3 | Chromium | 6.8 | | D | MS |
| 7440-48-4 | Cobalt | 2.9 | | D | MS |
| 7440-50-8 | Copper | 15.3 | | D | MS |
| 7439-89-6 | Iron | | | | |
| 7439-92-1 | Lead | 6.4 | | D | MS |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese | | | | |
| 7439-97-6 | Mercury | | | | |
| 7440-02-0 | Nickel | 3.4 | | D | MS |
| 7440-09-7 | Potassium | | | | |
| 7782-49-2 | Selenium | 2.2 | U | D | MS |
| 7440-22-4 | Silver | 0.017 | J | D | MS |
| 7440-23-5 | Sodium | | | | |
| 7440-28-0 | Thallium | 0.061 | J | D | MS |
| 7440-62-2 | Vanadium | 10.2 | | D* | MS |
| 7440-66-6 | Zinc | 11.0 | | D*E | MS |
| 57-12-5 | Cyanide | | | | |
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Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Initial Calibration Verification Source: EPA ICV-1 (0307)

Continuing Calibration Verification Source: 27549

Concentration Units: ug/L

| | Initial Calibration Verification | | | Continuing Calibration Verification | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | 2521 | 2570 | 102 | 250000 | 233000 | 93 | 245000 | 98 | P |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | 10026 | 10900 | 109 | 250000 | 240000 | 96 | 254000 | 102 | P |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | 5082 | 5500 | 108 | 250000 | 243000 | 97 | 258000 | 103 | P |
| Lead | | | | | | | | | |
| Magnesium | 6074 | 6280 | 103 | 250000 | 237000 | 95 | 250000 | 100 | P |
| Manganese | 499 | 520 | 104 | 25000 | 22800 | 91 | 24100 | 96 | P |
| Mercury | | | | | | | | | |
| Nickel | | | | | | | | | |
| Potassium | 10021 | 10000 | 100 | 250000 | 242000 | 97 | 261000 | 105 | P |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | 10097 | 10500 | 104 | 250000 | 243000 | 97 | 259000 | 104 | P |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP
2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Initial Calibration Verification Source: EPA ICV1 (0307)

Continuing Calibration Verification Source: 28405

Concentration Units: ug/L

| | Initial Calibration Verification | | | Continuing Calibration Verification | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | | | | | | |
| Antimony | 199 | 186 | 94 | 2500 | 2540 | 101 | 2550 | 102 | MS |
| Arsenic | 200 | 199 | 100 | 2500 | 2470 | 99 | 2480 | 99 | MS |
| Barium | 99 | 101 | 102 | 2500 | 2580 | 103 | 2570 | 103 | MS |
| Beryllium | 99 | 104 | 105 | 2500 | 2550 | 102 | 2570 | 103 | MS |
| Cadmium | 99 | 97.5 | 99 | 2500 | 2460 | 99 | 2470 | 99 | MS |
| Calcium | | | | | | | | | |
| Chromium | 98 | 96.5 | 98 | 2500 | 2480 | 99 | 2480 | 99 | MS |
| Cobalt | 100 | 98.9 | 99 | 2500 | 2460 | 99 | 2470 | 99 | MS |
| Copper | 98 | 102 | 104 | 2500 | 2380 | 95 | 2400 | 96 | MS |
| Iron | | | | | | | | | |
| Lead | 200 | 195 | 98 | 2500 | 2540 | 102 | 2570 | 103 | MS |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | 101 | 102 | 101 | 2500 | 2480 | 99 | 2480 | 99 | MS |
| Potassium | | | | | | | | | |
| Selenium | 206 | 203 | 98 | 250 | 257 | 103 | 258 | 103 | MS |
| Silver | 100 | 101 | 101 | 250 | 267 | 107 | 268 | 107 | MS |
| Sodium | | | | | | | | | |
| Thallium | 206 | 199 | 97 | 2500 | 2550 | 102 | 2590 | 103 | MS |
| Vanadium | 100 | 98.2 | 98 | 2500 | 2550 | 102 | 2580 | 103 | MS |
| Zinc | 205 | 207 | 101 | 2500 | 2370 | 95 | 2350 | 94 | MS |
| Cyanide | | | | | | | | | |
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(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP
2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 28405

Concentration Units: ug/L

| | Initial Calibration Verification | | | Continuing Calibration Verification | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | | | | | | |
| Antimony | | | | 2500 | 2590 | 103 | | | MS |
| Arsenic | | | | 2500 | 2500 | 100 | | | MS |
| Barium | | | | 2500 | 2570 | 103 | | | MS |
| Beryllium | | | | 2500 | 2580 | 103 | | | MS |
| Cadmium | | | | 2500 | 2480 | 99 | | | MS |
| Calcium | | | | | | | | | |
| Chromium | | | | 2500 | 2490 | 100 | | | MS |
| Cobalt | | | | 2500 | 2470 | 99 | | | MS |
| Copper | | | | 2500 | 2400 | 96 | | | MS |
| Iron | | | | | | | | | |
| Lead | | | | 2500 | 2600 | 104 | | | MS |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | | | | 2500 | 2470 | 99 | | | MS |
| Potassium | | | | | | | | | |
| Selenium | | | | 250 | 260 | 104 | | | MS |
| Silver | | | | 250 | 270 | 108 | | | MS |
| Sodium | | | | | | | | | |
| Thallium | | | | 2500 | 2600 | 104 | | | MS |
| Vanadium | | | | 2500 | 2590 | 104 | | | MS |
| Zinc | | | | 2500 | 2360 | 94 | | | MS |
| Cyanide | | | | | | | | | |
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(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP
2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Initial Calibration Verification Source: EPA ICV5-0508

Continuing Calibration Verification Source: ALS 28278

Concentration Units: ug/L

| | Initial Calibration Verification | | | Continuing Calibration Verification | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | | | | | | |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | | | | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | | | | | | | | | |
| Lead | | | | | | | | | |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | 4.0 | 4.2 | 106 | 5 | 5.0 | 99 | 5.4 | 108 | CV |
| Nickel | | | | | | | | | |
| Potassium | | | | | | | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP
2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Initial Calibration Verification Source:

Continuing Calibration Verification Source: ALS 28278

Concentration Units: ug/L

| | Initial Calibration Verification | | | Continuing Calibration Verification | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Aluminum | | | | | | | | | |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | | | | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | | | | | | | | | |
| Lead | | | | | | | | | |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | 5 | 5.5 | 111 | | | CV |
| Nickel | | | | | | | | | |
| Potassium | | | | | | | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP
3-IN
BLANKS

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Blank Matrix (soil/water/wipe/filter): Soil

Preparation Blank Concentration Units (ug/L, ug or mg/kg): mg/kg

| Analyte | Initial Calibration Blank (ug/L) | | Continuing Calibration Blank (ug/L) | | | | | | Preparation Blank | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | 1 | C | 2 | C | 3 | C | | C | M |
| Aluminum | 200 | U | 200 | U | 200 | U | | | 20.0 | U | P |
| Antimony | | | | | | | | | | | |
| Arsenic | | | | | | | | | | | |
| Barium | | | | | | | | | | | |
| Beryllium | | | | | | | | | | | |
| Cadmium | | | | | | | | | | | |
| Calcium | 5000 | U | 30.7 | J | 27.6 | J | | | 10.7 | J | P |
| Chromium | | | | | | | | | | | |
| Cobalt | | | | | | | | | | | |
| Copper | | | | | | | | | | | |
| Iron | 100 | U | 46.5 | J | 100 | U | | | 10.0 | U | P |
| Lead | | | | | | | | | | | |
| Magnesium | 5000 | U | 5000 | U | 5000 | U | | | 500 | U | P |
| Manganese | 15.0 | U | 3.1 | J | 2.7 | J | | | 1.5 | U | P |
| Mercury | -0.080 | J | -0.081 | J | -0.081 | J | -0.081 | J | -0.015 | J | CV |
| Nickel | | | | | | | | | | | |
| Potassium | 48.3 | J | 110 | J | 50.7 | J | | | 500 | U | P |
| Selenium | | | | | | | | | | | |
| Silver | | | | | | | | | | | |
| Sodium | 56.1 | J | 69.3 | J | 48.1 | J | | | 6.0 | J | P |
| Thallium | | | | | | | | | | | |
| Vanadium | | | | | | | | | | | |
| Zinc | | | | | | | | | | | |
| Cyanide | | | | | | | | | | | |
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USEPA - CLP
3-IN
BLANKS

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Blank Matrix (soil/water/wipe/filter): Soil

Preparation Blank Concentration Units (ug/L, ug or mg/kg): mg/kg

| Analyte | Initial Calibration Blank (ug/L) | | Continuing Calibration Blank (ug/L) | | | | | | Preparation Blank | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | 1 | C | 2 | C | 3 | C | | C | M |
| Aluminum | | | | | | | | | 20.0 | U | P |
| Antimony | | | | | | | | | | | |
| Arsenic | | | | | | | | | | | |
| Barium | | | | | | | | | | | |
| Beryllium | | | | | | | | | | | |
| Cadmium | | | | | | | | | | | |
| Calcium | | | | | | | | | 11.4 | J | P |
| Chromium | | | | | | | | | | | |
| Cobalt | | | | | | | | | | | |
| Copper | | | | | | | | | | | |
| Iron | | | | | | | | | 10.0 | U | P |
| Lead | | | | | | | | | | | |
| Magnesium | | | | | | | | | 4.8 | J | P |
| Manganese | | | | | | | | | 1.5 | U | P |
| Mercury | | | | | | | | | | | |
| Nickel | | | | | | | | | | | |
| Potassium | | | | | | | | | 7.4 | J | P |
| Selenium | | | | | | | | | | | |
| Silver | | | | | | | | | | | |
| Sodium | | | | | | | | | 2.0 | J | P |
| Thallium | | | | | | | | | | | |
| Vanadium | | | | | | | | | | | |
| Zinc | | | | | | | | | | | |
| Cyanide | | | | | | | | | | | |
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USEPA - CLP
3-IN
BLANKS

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Blank Matrix (soil/water/wipe/filter): Soil

Preparation Blank Concentration Units (ug/L, ug or mg/kg): mg/kg

| Analyte | Initial Calibration Blank (ug/L) | | Continuing Calibration Blank (ug/L) | | | | | | Preparation Blank | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | 1 | C | 2 | C | 3 | C | | C | M |
| Aluminum | | | | | | | | | | | |
| Antimony | 0.59 | J | 1.2 | J | 1.0 | J | 1.2 | J | 0.17 | J | MS |
| Arsenic | 5.0 | U | 5.0 | U | 5.0 | U | 5.0 | U | 0.50 | U | MS |
| Barium | 50.0 | U | 0.27 | J | 0.19 | J | 0.31 | J | 0.025 | J | MS |
| Beryllium | 5.0 | U | 0.35 | J | 0.24 | J | 0.40 | J | 0.038 | J | MS |
| Cadmium | 0.057 | J | 0.28 | J | 0.20 | J | 0.32 | J | 0.024 | J | MS |
| Calcium | | | | | | | | | | | |
| Chromium | 10.0 | U | 0.24 | J | 0.15 | J | 0.28 | J | 0.012 | J | MS |
| Cobalt | 0.046 | J | 0.27 | J | 0.18 | J | 0.30 | J | 0.023 | J | MS |
| Copper | 10.0 | U | 0.63 | J | 0.57 | J | 0.63 | J | 0.098 | J | MS |
| Iron | | | | | | | | | | | |
| Lead | 0.063 | J | 0.33 | J | 0.23 | J | 0.35 | J | 0.040 | J | MS |
| Magnesium | | | | | | | | | | | |
| Manganese | | | | | | | | | | | |
| Mercury | | | | | | | | | | | |
| Nickel | 5.0 | U | 0.27 | J | 5.0 | U | 0.31 | J | 0.50 | U | MS |
| Potassium | | | | | | | | | | | |
| Selenium | 25.0 | U | 25.0 | U | 25.0 | U | 25.0 | U | 2.5 | U | MS |
| Silver | 0.15 | J | 0.12 | J | 0.090 | J | 0.097 | J | 0.016 | J | MS |
| Sodium | | | | | | | | | | | |
| Thallium | 0.091 | J | 0.43 | J | 0.37 | J | 0.47 | J | 0.050 | J | MS |
| Vanadium | 25.0 | U | 0.33 | J | 0.23 | J | 0.36 | J | 0.050 | J | MS |
| Zinc | 10.0 | U | 10.0 | U | 10.0 | U | 10.0 | U | 0.41 | J | MS |
| Cyanide | | | | | | | | | | | |
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USEPA - CLP
4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-AES Instrument ID: ICP08 ICSA Source: EPA ICSA (1211)

ICSB Source: EPA ICSAB (1211/0710)

Concentration Units: ug/L

| Analyte | True Sol. A | True Sol. AB | Found Sol. A | %R | Found Sol. AB | %R |
|---|---|---|---|---|---|---|
| Aluminum | 254900 | 246800 | 259000 | 102 | 253000 | 102 |
| Antimony | | | | | | |
| Arsenic | | | | | | |
| Barium | | | | | | |
| Beryllium | | | | | | |
| Cadmium | | | | | | |
| Calcium | 244500 | 234900 | 262000 | 107 | 258000 | 110 |
| Chromium | | | | | | |
| Cobalt | | | | | | |
| Copper | | | | | | |
| Iron | 100700 | 99320 | 106000 | 105 | 104000 | 105 |
| Lead | | | | | | |
| Magnesium | 255400 | 248000 | 267000 | 105 | 261000 | 105 |
| Manganese | 7 | 507 | 16.5 | 236 | 526 | 104 |
| Nickel | | | | | | |
| Potassium | 0 | 0 | 46.3 | | 72.6 | |
| Selenium | | | | | | |
| Silver | | | | | | |
| Sodium | 0 | 0 | 70.9 | | 106 | |
| Thallium | | | | | | |
| Vanadium | | | | | | |
| Zinc | | | | | | |
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USEPA - CLP
4B-IN
ICP-MS INTERFERENCE CHECK SAMPLE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 ICSA Source: EPA ICSA (0803)

ICSB Source: EPA ICSB (0803)

Concentration Units: ug/L

| Analyte | True | | Found | | | |
|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | %R | Sol. AB | %R |
| Aluminum | | | | | | |
| Antimony | 1.5 | 22 | 1.4 | 92 | 20.8 | 95 |
| Arsenic | 0.1 | 19 | 0.33 | 0 | 18.7 | 98 |
| Barium | 1.2 | 22 | 1.5 | 126 | 22.5 | 102 |
| Beryllium | 0 | 19 | 0.34 | | 19.8 | 104 |
| Cadmium | 0.7 | 20 | 0.35 | 51 | 19.4 | 97 |
| Calcium | | | | | | |
| Chromium | 21 | 40 | 19.4 | 92 | 38.6 | 96 |
| Cobalt | 1 | 20 | 1.4 | 136 | 20.1 | 101 |
| Copper | 8 | 25 | 7.7 | 96 | 25.5 | 102 |
| Iron | | | | | | |
| Lead | 4 | 25 | 4.4 | 111 | 24.7 | 99 |
| Magnesium | | | | | | |
| Manganese | | | | | | |
| Molybdenum | | | | | | |
| Nickel | 6 | 24 | 6.7 | 112 | 25.2 | 105 |
| Potassium | | | | | | |
| Selenium | 0.3 | 19 | -0.24 | 0 | 17.6 | 93 |
| Silver | 0 | 18 | 0.033 | | 18.8 | 105 |
| Sodium | | | | | | |
| Thallium | 0 | 21 | 0.083 | | 20.7 | 99 |
| Titanium | | | | | | |
| Vanadium | 0.5 | 19 | -2.7 | 546 | 17.1 | 90 |
| Zinc | 11 | 29 | 11.1 | 101 | 27.4 | 94 |
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USEPA - CLP
5A-IN
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MF9M27S

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

% Solids for Sample: 86.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Spike Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | NR |
| Antimony | | | | | | | | | NR |
| Arsenic | | | | | | | | | NR |
| Barium | | | | | | | | | NR |
| Beryllium | | | | | | | | | NR |
| Cadmium | | | | | | | | | NR |
| Calcium | | | | | | | | | NR |
| Chromium | | | | | | | | | NR |
| Cobalt | | | | | | | | | NR |
| Copper | | | | | | | | | NR |
| Iron | | | | | | | | | NR |
| Lead | | | | | | | | | NR |
| Magnesium | | | | | | | | | NR |
| Manganese | 75-125 | 173 | | 79.7 | | 88.3 | 106 | | P |
| Mercury | 75-125 | 0.61 | | 0.11 | U | 0.57 | 108 | | CV |
| Nickel | | | | | | | | | NR |
| Potassium | | | | | | | | | NR |
| Selenium | | | | | | | | | NR |
| Silver | | | | | | | | | NR |
| Sodium | | | | | | | | | NR |
| Thallium | | | | | | | | | NR |
| Vanadium | | | | | | | | | NR |
| Zinc | | | | | | | | | NR |
| Cyanide | | | | | | | | | |
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Comments:

USEPA - CLP
5A-IN
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MF9M27S

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

% Solids for Sample: 86.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Spike Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | NR |
| Antimony | 75-125 | 0.58 | J | 0.019 | J | 8.0 | 7 | N | MS |
| Arsenic | 75-125 | 5.2 | | 2.1 | | 3.2 | 97 | | MS |
| Barium | 75-125 | 235 | | 78.6 | | 159 | 98 | | MS |
| Beryllium | 75-125 | 4.6 | | 0.70 | | 4.0 | 98 | | MS |
| Cadmium | 75-125 | 3.7 | | 0.40 | U | 4.0 | 93 | | MS |
| Calcium | | | | | | | | | NR |
| Chromium | 75-125 | 31.8 | | 18.2 | | 15.9 | 85 | | MS |
| Cobalt | 75-125 | 41.7 | | 5.2 | | 39.9 | 91 | | MS |
| Copper | 75-125 | 26.0 | | 6.6 | | 19.9 | 97 | | MS |
| Iron | | | | | | | | | NR |
| Lead | | 16.1 | | 7.9 | | 1.6 | 517 | | MS |
| Magnesium | | | | | | | | | NR |
| Manganese | | | | | | | | | NR |
| Mercury | | | | | | | | | |
| Nickel | 75-125 | 46.5 | | 10.9 | | 39.9 | 89 | | MS |
| Potassium | | | | | | | | | NR |
| Selenium | 75-125 | 6.7 | | 2.0 | U | 8.0 | 84 | | MS |
| Silver | 75-125 | 3.9 | | 0.028 | J | 4.0 | 97 | | MS |
| Sodium | | | | | | | | | NR |
| Thallium | 75-125 | 3.9 | | 0.12 | J | 4.0 | 95 | | MS |
| Vanadium | 75-125 | 67.5 | | 23.7 | | 39.9 | 110 | | MS |
| Zinc | 75-125 | 50.6 | | 15.4 | | 39.9 | 88 | | MS |
| Cyanide | | | | | | | | | |
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Comments:

USEPA - CLP
5B-IN
POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MF9M27A

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Spike Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | NR |
| Antimony | | 7.3 | | 0.019 | J | 8.0 | 91 | | MS |
| Arsenic | | | | | | | | | NR |
| Barium | | | | | | | | | NR |
| Beryllium | | | | | | | | | NR |
| Cadmium | | | | | | | | | NR |
| Calcium | | | | | | | | | NR |
| Chromium | | | | | | | | | NR |
| Cobalt | | | | | | | | | NR |
| Copper | | | | | | | | | NR |
| Iron | | | | | | | | | NR |
| Lead | | | | | | | | | NR |
| Magnesium | | | | | | | | | NR |
| Manganese | | | | | | | | | NR |
| Mercury | | | | | | | | | NR |
| Nickel | | | | | | | | | NR |
| Potassium | | | | | | | | | NR |
| Selenium | | | | | | | | | NR |
| Silver | | | | | | | | | NR |
| Sodium | | | | | | | | | NR |
| Thallium | | | | | | | | | NR |
| Vanadium | | | | | | | | | NR |
| Zinc | | | | | | | | | NR |
| Cyanide | | | | | | | | | NR |
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Comments:

USEPA - CLP
6-IN
DUPLICATES

EPA SAMPLE NO.

MF9M27D

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

% Solids for Sample: 86.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 6930 | | 11700 | | 51 | * | P |
| Antimony | | | | | | | | |
| Arsenic | | | | | | | | |
| Barium | | | | | | | | |
| Beryllium | | | | | | | | |
| Cadmium | | | | | | | | |
| Calcium | 438 | 1520 | | 1540 | | 2 | | P |
| Chromium | | | | | | | | |
| Cobalt | | | | | | | | |
| Copper | | | | | | | | |
| Iron | | 10300 | | 15900 | | 43 | * | P |
| Lead | | | | | | | | |
| Magnesium | 438 | 939 | | 1390 | | 39 | * | P |
| Manganese | | 79.7 | | 89.1 | | 11 | | P |
| Mercury | | 0.11 | U | 0.11 | U | | | CV |
| Nickel | | | | | | | | |
| Potassium | 438 | 642 | | 1020 | | 46 | | P |
| Selenium | | | | | | | | |
| Silver | | | | | | | | |
| Sodium | | 46.3 | J | 55.9 | J | 19 | | P |
| Thallium | | | | | | | | |
| Vanadium | | | | | | | | |
| Zinc | | | | | | | | |
| Cyanide | | | | | | | | |
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USEPA - CLP
6-IN
DUPLICATES

EPA SAMPLE NO.

MF9M27D

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

% Solids for Sample: 86.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | |
| Antimony | | 0.019 | J | 0.016 | J | 20 | | MS |
| Arsenic | | 2.1 | | 2.8 | | 29 | * | MS |
| Barium | | 78.6 | | 117 | | 39 | * | MS |
| Beryllium | | 0.70 | | 0.84 | | 17 | | MS |
| Cadmium | | 0.40 | U | 0.40 | U | | | MS |
| Calcium | | | | | | | | |
| Chromium | | 18.2 | | 21.3 | | 15 | | MS |
| Cobalt | | 5.2 | | 5.6 | | 7 | | MS |
| Copper | | 6.6 | | 8.0 | | 20 | | MS |
| Iron | | | | | | | | |
| Lead | | 7.9 | | 8.4 | | 6 | | MS |
| Magnesium | | | | | | | | |
| Manganese | | | | | | | | |
| Mercury | | | | | | | | |
| Nickel | | 10.9 | | 12.3 | | 12 | | MS |
| Potassium | | | | | | | | |
| Selenium | | 2.0 | U | 0.28 | J | 200 | | MS |
| Silver | | 0.028 | J | 0.041 | J | 38 | | MS |
| Sodium | | | | | | | | |
| Thallium | 0.080 | 0.12 | J | 0.15 | J | 22 | | MS |
| Vanadium | | 23.7 | | 31.8 | | 29 | * | MS |
| Zinc | | 15.4 | | 19.2 | | 22 | * | MS |
| Cyanide | | | | | | | | |
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USEPA - CLP
7-IN
LABORATORY CONTROL SAMPLE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

| Analyte | Aqueous/Water (ug/L), Soil/Sediment (mg/kg), Wipe/Filter (ug) | | |
|---|---|---|---|
| | True | Found | %R |
| Aluminum | 40.0 | 40.8 | 102 |
| Antimony | | | |
| Arsenic | | | |
| Barium | | | |
| Beryllium | | | |
| Cadmium | | | |
| Calcium | 1000 | 1020 | 102 |
| Chromium | | | |
| Cobalt | | | |
| Copper | | | |
| Iron | 20.0 | 20.9 | 105 |
| Lead | | | |
| Magnesium | 1000 | 979 | 98 |
| Manganese | 3.0 | 2.9 | 96 |
| Mercury | | | |
| Nickel | | | |
| Potassium | 1000 | 944 | 94 |
| Selenium | | | |
| Silver | | | |
| Sodium | 1000 | 982 | 98 |
| Thallium | | | |
| Vanadium | | | |
| Zinc | | | |
| Cyanide | | | |
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USEPA - CLP
7-IN
LABORATORY CONTROL SAMPLE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

| Analyte | Aqueous/Water (ug/L), Soil/Sediment (mg/kg), Wipe/Filter (ug) | | |
|---|---|---|---|
| | True | Found | %R |
| Aluminum | 40.0 | 39.2 | 98 |
| Antimony | | | |
| Arsenic | | | |
| Barium | | | |
| Beryllium | | | |
| Cadmium | | | |
| Calcium | 1000 | 1080 | 108 |
| Chromium | | | |
| Cobalt | | | |
| Copper | | | |
| Iron | 20.0 | 23.1 | 115 |
| Lead | | | |
| Magnesium | 1000 | 1040 | 104 |
| Manganese | 3.0 | 3.1 | 102 |
| Mercury | | | |
| Nickel | | | |
| Potassium | 1000 | 1020 | 102 |
| Selenium | | | |
| Silver | | | |
| Sodium | 1000 | 1040 | 104 |
| Thallium | | | |
| Vanadium | | | |
| Zinc | | | |
| Cyanide | | | |
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USEPA - CLP
7-IN
LABORATORY CONTROL SAMPLE

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

| Analyte | Aqueous/Water (ug/L), Soil/Sediment (mg/kg), Wipe/Filter (ug) True | Found | %R |
|---|---|---|---|
| Aluminum | | | |
| Antimony | 2.0 | 1.9 | 94 |
| Arsenic | 1.0 | 0.93 | 93 |
| Barium | 10.0 | 9.7 | 97 |
| Beryllium | 1.0 | 1.0 | 103 |
| Cadmium | 1.0 | 0.95 | 95 |
| Calcium | | | |
| Chromium | 2.0 | 1.9 | 94 |
| Cobalt | 1.0 | 0.95 | 95 |
| Copper | 2.0 | 2.1 | 104 |
| Iron | | | |
| Lead | 1.0 | 0.96 | 96 |
| Magnesium | | | |
| Manganese | | | |
| Mercury | | | |
| Nickel | 1.0 | 1.0 | 100 |
| Potassium | | | |
| Selenium | 5.0 | 4.5 | 91 |
| Silver | 1.0 | 1.0 | 103 |
| Sodium | | | |
| Thallium | 1.0 | 0.97 | 97 |
| Vanadium | 5.0 | 5.2 | 103 |
| Zinc | 2.0 | 2.3 | 116 |
| Cyanide | | | |
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USEPA - CLP
8-IN
ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

MF9M27L

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 6930 | | 6600 | | 5 | | P |
| Antimony | | | | | | | |
| Arsenic | | | | | | | |
| Barium | | | | | | | |
| Beryllium | | | | | | | |
| Cadmium | | | | | | | |
| Calcium | 1520 | | 1470 | J | 3 | | P |
| Chromium | | | | | | | |
| Cobalt | | | | | | | |
| Copper | | | | | | | |
| Iron | 10300 | | 9910 | | 4 | | P |
| Lead | | | | | | | |
| Magnesium | 939 | | 888 | J | 5 | | P |
| Manganese | 79.7 | | 76.2 | | 4 | | P |
| Nickel | | | | | | | |
| Potassium | 642 | | 607 | J | 6 | | P |
| Selenium | | | | | | | |
| Silver | | | | | | | |
| Sodium | 46.3 | J | 52.9 | J | 14 | | P |
| Thallium | | | | | | | |
| Vanadium | | | | | | | |
| Zinc | | | | | | | |
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USEPA - CLP
8-IN
ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

MF9M27L

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Matrix: Soil

Concentration Units (ug/L or mg/kg dry weight): mg/kg

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | |
| Antimony | 0.019 | J | 4.0 | U | 100 | | MS |
| Arsenic | 2.1 | | 2.2 | | 7 | | MS |
| Barium | 78.6 | | 80.6 | | 3 | | MS |
| Beryllium | 0.70 | | 0.72 | J | 1 | | MS |
| Cadmium | 0.40 | U | 2.0 | U | | | MS |
| Calcium | | | | | | | |
| Chromium | 18.2 | | 19.5 | | 7 | | MS |
| Cobalt | 5.2 | | 5.7 | | 10 | | MS |
| Copper | 6.6 | | 7.2 | | 10 | | MS |
| Iron | | | | | | | |
| Lead | 7.9 | | 8.0 | | 1 | | MS |
| Magnesium | | | | | | | |
| Manganese | | | | | | | |
| Nickel | 10.9 | | 11.7 | | 8 | | MS |
| Potassium | | | | | | | |
| Selenium | 2.0 | U | 10 | U | | | MS |
| Silver | 0.028 | J | 0.028 | J | 1 | | MS |
| Sodium | | | | | | | |
| Thallium | 0.12 | J | 0.13 | J | 7 | | MS |
| Vanadium | 23.7 | | 25.3 | | 7 | | MS |
| Zinc | 15.4 | | 18.5 | | 20 | E | MS |
| | | | | | | | |
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USEPA - CLP
9-IN
METHOD DETECTION LIMIT (MDL) (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument Type: CV Instrument ID: AACV02 Date: 01/15/2015

Preparation Method: 7471B

Concentration Units (ug/L, mg/kg or ug): mg/kg

| Analyte | Wavelength/Mass | MDL |
|---|---|---|
| Aluminum | | |
| Antimony | | |
| Arsenic | | |
| Barium | | |
| Beryllium | | |
| Cadmium | | |
| Calcium | | |
| Chromium | | |
| Cobalt | | |
| Copper | | |
| Iron | | |
| Lead | | |
| Magnesium | | |
| Manganese | | |
| Mercury | 253.65 | 0.0015 |
| Nickel | | |
| Potassium | | |
| Selenium | | |
| Silver | | |
| Sodium | | |
| Thallium | | |
| Vanadium | | |
| Zinc | | |
| Cyanide | | |
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Comments:

USEPA - CLP
9-IN
METHOD DETECTION LIMIT (MDL) (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument Type: P Instrument ID: ICP08 Date: 03/29/2015

Preparation Method: 3050B

Concentration Units (ug/L, mg/kg or ug): mg/kg

| Analyte | Wavelength/Mass | MDL |
|---|---|---|
| Aluminum | 308.22 | 6.8 |
| Antimony | | |
| Arsenic | | |
| Barium | | |
| Beryllium | | |
| Cadmium | | |
| Calcium | 317.93 | 2.1 |
| Chromium | | |
| Cobalt | | |
| Copper | | |
| Iron | 259.84 | 3.9 |
| Lead | | |
| Magnesium | 279.08 | 3.9 |
| Manganese | 257.61 | 0.093 |
| Mercury | | |
| Nickel | | |
| Potassium | 766.49 | 4.6 |
| Selenium | | |
| Silver | | |
| Sodium | 589.59 | 1.9 |
| Thallium | | |
| Vanadium | | |
| Zinc | | |
| Cyanide | | |
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Comments:

USEPA - CLP
9-IN
METHOD DETECTION LIMIT (MDL) (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument Type: MS Instrument ID: ICPM02 Date: 05/22/2015

Preparation Method: 3050B

Concentration Units (ug/L, mg/kg or ug): mg/kg

| Analyte | Wavelength/Mass | MDL |
|---|---|---|
| Aluminum | | |
| Antimony | 121.00 | 0.015 |
| Arsenic | 75.00 | 0.073 |
| Barium | 137.00 | 0.013 |
| Beryllium | 9.00 | 0.0079 |
| Cadmium | 111.00 | 0.0053 |
| Calcium | | |
| Chromium | 52.00 | 0.011 |
| Cobalt | 59.00 | 0.0030 |
| Copper | 63.00 | 0.029 |
| Iron | | |
| Lead | 206,207,208 | 0.0049 |
| Magnesium | | |
| Manganese | | |
| Mercury | | |
| Nickel | 60.00 | 0.016 |
| Potassium | | |
| Selenium | 82.00 | 0.30 |
| Silver | 107.00 | 0.0025 |
| Sodium | | |
| Thallium | 205.00 | 0.0059 |
| Vanadium | 51.00 | 0.017 |
| Zinc | 66.00 | 0.16 |
| Cyanide | | |
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Comments:

USEPA - CLP
10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-AES Instrument ID: ICP08 Date: 03/22/2015

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Al | Ca | Fe | Mg | Ba |
|---|---|---|---|---|---|---|
| Aluminum | 308.22 | 0 | 0 | 0 | 0 | 0 |
| Antimony | 206.83 | 0 | 0 | 0.000034 | 0 | 0 |
| Arsenic | 189.04 | 0.000002 | 0 | -0.000009 | 0 | 0 |
| Barium | 455.40 | 0 | 0 | 0 | 0 | 0 |
| Beryllium | 313.11 | 0 | 0 | 0 | 0 | 0 |
| Cadmium | 214.44 | -0.000003 | 0 | 0.000029 | 0 | 0 |
| Calcium | 317.93 | 0 | 0 | 0 | 0 | 0 |
| Chromium | 205.55 | 0 | 0 | 0 | 0 | 0 |
| Cobalt | 228.62 | 0 | 0 | 0.000016 | 0 | 0.000208 |
| Copper | 327.40 | 0 | 0 | 0 | 0 | 0 |
| Iron | 259.84 | 0 | 0 | 0 | 0 | 0 |
| Lead | 220.35 | 0.000209 | 0 | 0.000053 | 0 | 0 |
| Magnesium | 279.08 | 0 | 0 | 0 | 0 | 0 |
| Manganese | 257.61 | 0 | 0 | 0 | 0 | 0 |
| Nickel | 231.60 | 0 | 0 | 0.000064 | 0 | 0 |
| Potassium | 766.49 | 0 | 0 | 0 | 0 | 0 |
| Selenium | 196.09 | 0.000048 | 0 | 0.000016 | 0 | 0 |
| Silver | 328.07 | 0 | 0 | 0 | 0 | 0 |
| Sodium | 589.59 | 0 | 0 | 0 | 0 | 0 |
| Thallium | 190.86 | 0 | 0 | -0.000015 | 0 | 0 |
| Vanadium | 292.40 | 0 | 0 | 0.000042 | 0 | 0 |
| Zinc | 206.20 | 0 | 0 | 0.000012 | 0 | 0 |
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Comments:

USEPA - CLP
10B-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-AES Instrument ID: ICP08 Date: 03/22/2015

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Be | Co | Cr | Cu | Mn |
|---|---|---|---|---|---|---|
| Aluminum | 308.22 | 0 | 0 | 0 | 0 | 0 |
| Antimony | 206.83 | 0 | 0 | 0.004584 | 0 | 0 |
| Arsenic | 189.04 | 0 | 0 | 0.000182 | 0 | 0 |
| Barium | 455.40 | 0 | 0 | 0 | 0 | 0 |
| Beryllium | 313.11 | 0 | 0 | 0 | 0 | 0 |
| Cadmium | 214.44 | 0 | 0 | 0 | 0 | 0 |
| Calcium | 317.93 | 0 | 0 | 0 | 0 | 0 |
| Chromium | 205.55 | 0.000349 | 0 | 0 | 0 | 0 |
| Cobalt | 228.62 | 0 | 0 | 0 | 0 | 0 |
| Copper | 327.40 | 0 | 0 | 0 | 0 | 0 |
| Iron | 259.84 | 0 | 0 | 0 | 0 | 0.002834 |
| Lead | 220.35 | 0 | 0.000210 | 0 | 0.000609 | 0 |
| Magnesium | 279.08 | 0 | 0 | 0 | 0 | 0 |
| Manganese | 257.61 | 0 | 0 | 0 | 0 | 0 |
| Nickel | 231.60 | 0 | 0.000299 | 0 | 0 | 0 |
| Potassium | 766.49 | 0 | 0 | 0 | 0 | 0 |
| Selenium | 196.09 | 0 | 0 | 0 | 0 | 0.000491 |
| Silver | 328.07 | 0 | 0 | 0 | 0 | 0.000122 |
| Sodium | 589.59 | 0 | 0 | 0 | 0 | 0 |
| Thallium | 190.86 | 0 | 0.003624 | 0.000231 | 0 | 0.000867 |
| Vanadium | 292.40 | 0 | 0 | 0 | 0 | 0 |
| Zinc | 206.20 | 0 | 0 | -0.000216 | 0 | 0 |
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Comments:

USEPA - CLP
10B-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-AES Instrument ID: ICP08 Date: 03/22/2015

| Analyte | Wave-length (nm) | Interelement Correction Factors for: Mo | Ni | Ti | Tl | V |
|---|---|---|---|---|---|---|
| Aluminum | 308.22 | 0.007083 | 0 | 0 | 0 | 0.142985 |
| Antimony | 206.83 | -0.002050 | 0 | 0 | 0 | 0 |
| Arsenic | 189.04 | 0.001151 | 0 | 0 | 0 | 0 |
| Barium | 455.40 | 0 | 0 | 0 | 0 | 0 |
| Beryllium | 313.11 | 0 | 0 | 0 | 0 | 0.000244 |
| Cadmium | 214.44 | 0 | 0 | 0 | 0 | 0 |
| Calcium | 317.93 | 0 | 0 | 0 | 0 | 0 |
| Chromium | 205.55 | 0.000511 | 0 | 0 | 0 | 0.000049 |
| Cobalt | 228.62 | -0.000958 | 0.000179 | 0.002132 | 0 | 0 |
| Copper | 327.40 | -0.000486 | 0 | 0 | 0 | 0 |
| Iron | 259.84 | 0 | 0 | 0 | 0 | 0 |
| Lead | 220.35 | -0.000259 | 0.000210 | 0 | 0 | 0 |
| Magnesium | 279.08 | 0 | 0 | 0 | 0 | 0 |
| Manganese | 257.61 | 0 | 0 | 0 | 0 | 0 |
| Nickel | 231.60 | 0 | 0 | 0 | 0.000479 | 0 |
| Potassium | 766.49 | 0 | 0 | 0 | 0 | 0 |
| Selenium | 196.09 | 0 | 0 | 0 | 0 | 0 |
| Silver | 328.07 | 0.000189 | 0 | 0 | 0 | 0.000084 |
| Sodium | 589.59 | 0 | 0 | 0 | 0 | 0 |
| Thallium | 190.86 | 0 | 0 | 0 | 0 | 0.002259 |
| Vanadium | 292.40 | -0.001033 | 0 | 0.000987 | 0 | 0 |
| Zinc | 206.20 | 0.000258 | 0 | 0 | 0 | 0 |
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Comments:

USEPA - CLP
11-IN
INTERNAL STANDARD ASSOCIATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Date: 06/17/2015 14:02:00

| Analyte | Assoc. Internal Standard 1 | Assoc. Internal Standard 2 |
|---|---|---|
| Aluminum | | |
| Antimony | Rh | Tb |
| Arsenic | Sc | Y |
| Barium | Rh | Tb |
| Beryllium | Li | Sc |
| Cadmium | Rh | Tb |
| Calcium | | |
| Chromium | Sc | Y |
| Cobalt | Sc | Y |
| Copper | Sc | Y |
| Iron | | |
| Lead | Tb | Bi |
| Magnesium | | |
| Manganese | | |
| Nickel | Sc | Y |
| Potassium | | |
| Selenium | Sc | Y |
| Silver | Rh | Tb |
| Sodium | | |
| Thallium | Tb | Bi |
| Vanadium | Sc | Y |
| Zinc | Sc | Y |
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USEPA - CLP
12-IN
PREPARATION LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Method: 3050B

| EPA Sample No. | Preparation Date | Initial Weight/Volume (g) or (ml) | Final Volume (mL) |
|---|---|---|---|
| PBS1 | 06/09/2015 | 1.00 | 100 |
| LCS1 | 06/09/2015 | 1.00 | 100 |
| MF9M21 | 06/09/2015 | 1.25 | 100 |
| MF9M22 | 06/09/2015 | 1.22 | 100 |
| MF9M23 | 06/09/2015 | 1.46 | 100 |
| MF9M24 | 06/09/2015 | 1.32 | 100 |
| MF9M25 | 06/09/2015 | 1.29 | 100 |
| MF9M26 | 06/09/2015 | 1.02 | 100 |
| MF9M27 | 06/09/2015 | 1.45 | 100 |
| MF9M27D | 06/09/2015 | 1.45 | 100 |
| MF9M27S | 06/09/2015 | 1.45 | 100 |
| MF9M28 | 06/09/2015 | 1.16 | 100 |
| MF9M29 | 06/09/2015 | 1.40 | 100 |
| MF9M30 | 06/09/2015 | 1.31 | 100 |
| MF9M31 | 06/09/2015 | 1.19 | 100 |
| MF9M32 | 06/09/2015 | 1.45 | 100 |
| MF9M33 | 06/09/2015 | 1.06 | 100 |
| MF9M34 | 06/09/2015 | 1.26 | 100 |
| MF9M35 | 06/09/2015 | 1.33 | 100 |
| MF9M37 | 06/09/2015 | 1.12 | 100 |
| MF9M38 | 06/09/2015 | 1.16 | 100 |
| MF9M39 | 06/09/2015 | 1.09 | 100 |
| MF9M40 | 06/09/2015 | 1.46 | 100 |
| MF9M41 | 06/09/2015 | 1.33 | 100 |
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USEPA - CLP
12-IN
PREPARATION LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Method: 3050B

| EPA Sample No. | Preparation Date | Initial Weight/Volume (g) or (ml) | Final Volume (mL) |
|---|---|---|---|
| PBS1 | 06/09/2015 | 1.00 | 100 |
| LCS1 | 06/09/2015 | 1.00 | 100 |
| MF9M21 | 06/09/2015 | 1.13 | 100 |
| MF9M22 | 06/09/2015 | 1.27 | 100 |
| MF9M23 | 06/09/2015 | 1.10 | 100 |
| MF9M24 | 06/09/2015 | 1.16 | 100 |
| MF9M25 | 06/09/2015 | 1.21 | 100 |
| MF9M26 | 06/09/2015 | 1.36 | 100 |
| MF9M27 | 06/09/2015 | 1.31 | 100 |
| MF9M27D | 06/09/2015 | 1.32 | 100 |
| MF9M27S | 06/09/2015 | 1.31 | 100 |
| MF9M28 | 06/09/2015 | 1.16 | 100 |
| MF9M29 | 06/09/2015 | 1.30 | 100 |
| MF9M30 | 06/09/2015 | 1.25 | 100 |
| MF9M31 | 06/09/2015 | 1.33 | 100 |
| MF9M32 | 06/09/2015 | 1.37 | 100 |
| MF9M33 | 06/09/2015 | 1.10 | 100 |
| MF9M34 | 06/09/2015 | 1.34 | 100 |
| MF9M35 | 06/09/2015 | 1.23 | 100 |
| MF9M37 | 06/09/2015 | 1.25 | 100 |
| MF9M38 | 06/09/2015 | 1.12 | 100 |
| MF9M39 | 06/09/2015 | 1.14 | 100 |
| MF9M40 | 06/09/2015 | 1.38 | 100 |
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USEPA - CLP
12-IN
PREPARATION LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Method: 3050B

| EPA Sample No. | Preparation Date | Initial Weight/Volume (g) or (ml) | Final Volume (mL) |
|---|---|---|---|
| PBS2 | 06/11/2015 | 1.00 | 100 |
| LCS2 | 06/11/2015 | 1.00 | 100 |
| MF9M41 | 06/11/2015 | 1.29 | 100 |

USEPA - CLP
12-IN
PREPARATION LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Preparation Method: 7471B

| EPA Sample No. | Preparation Date | Initial Weight/Volume (g) or (ml) | Final Volume (mL) |
|---|---|---|---|
| S0 | 06/10/2015 | 0.50 | 100 |
| S0.2 | 06/10/2015 | 0.50 | 100 |
| S0.5 | 06/10/2015 | 0.50 | 100 |
| S1.0 | 06/10/2015 | 0.50 | 100 |
| S5.0 | 06/10/2015 | 0.50 | 100 |
| S10 | 06/10/2015 | 0.50 | 100 |
| ICB | 06/10/2015 | 0.50 | 100 |
| ICV | 06/10/2015 | 0.50 | 100 |
| CCB | 06/10/2015 | 0.50 | 100 |
| CCV | 06/10/2015 | 0.50 | 100 |
| PBS1 | 06/10/2015 | 0.50 | 100 |
| MF9M21 | 06/10/2015 | 0.59 | 100 |
| MF9M22 | 06/10/2015 | 0.53 | 100 |
| MF9M23 | 06/10/2015 | 0.58 | 100 |
| MF9M24 | 06/10/2015 | 0.56 | 100 |
| MF9M25 | 06/10/2015 | 0.52 | 100 |
| MF9M26 | 06/10/2015 | 0.54 | 100 |
| MF9M27 | 06/10/2015 | 0.51 | 100 |
| MF9M27D | 06/10/2015 | 0.51 | 100 |
| MF9M27S | 06/10/2015 | 0.51 | 100 |
| MF9M28 | 06/10/2015 | 0.56 | 100 |
| MF9M29 | 06/10/2015 | 0.54 | 100 |
| MF9M30 | 06/10/2015 | 0.55 | 100 |
| MF9M31 | 06/10/2015 | 0.60 | 100 |
| MF9M32 | 06/10/2015 | 0.53 | 100 |
| MF9M33 | 06/10/2015 | 0.57 | 100 |
| MF9M34 | 06/10/2015 | 0.56 | 100 |
| MF9M35 | 06/10/2015 | 0.51 | 100 |
| MF9M37 | 06/10/2015 | 0.51 | 100 |
| MF9M38 | 06/10/2015 | 0.55 | 100 |
| MF9M39 | 06/10/2015 | 0.58 | 100 |
| MF9M40 | 06/10/2015 | 0.50 | 100 |
| MF9M41 | 06/10/2015 | 0.58 | 100 |
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USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: AACV02 Analysis Method: CV

Start Date: 06/11/2015 End Date: 06/11/2015

| EPA Sample No. | D/F | Time | 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 | | |
| S0 | 1.0 | 1051 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| S0.2 | 1.0 | 1052 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| S0.5 | 1.0 | 1053 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| S1.0 | 1.0 | 1055 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| S5.0 | 1.0 | 1056 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| S10 | 1.0 | 1057 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ICV1 | 1.0 | 1058 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| ICB1 | 1.0 | 1059 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV1 | 1.0 | 1100 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCB1 | 1.0 | 1101 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| PBS1 | 1.0 | 1103 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M21 | 1.0 | 1104 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M22 | 1.0 | 1105 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M23 | 1.0 | 1106 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M24 | 1.0 | 1107 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M25 | 1.0 | 1108 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M26 | 1.0 | 1109 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M27 | 1.0 | 1111 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M27D | 1.0 | 1112 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M27S | 1.0 | 1113 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M28 | 1.0 | 1114 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M29 | 1.0 | 1115 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M30 | 1.0 | 1116 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV2 | 1.0 | 1117 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCB2 | 1.0 | 1119 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M31 | 1.0 | 1120 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M32 | 1.0 | 1121 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M33 | 1.0 | 1122 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M34 | 1.0 | 1123 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M35 | 1.0 | 1124 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M37 | 1.0 | 1125 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M38 | 1.0 | 1127 | | | | | | | | | | | | | | | X | | | | | | | | | | | |

USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: AACV02 Analysis Method: CV

Start Date: 06/11/2015 End Date: 06/11/2015

| EPA Sample No. | D/F | Time | 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 | | |
| MF9M39 | 1.0 | 1128 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M40 | 1.0 | 1129 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| MF9M41 | 1.0 | 1130 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCV3 | 1.0 | 1131 | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| CCB3 | 1.0 | 1132 | | | | | | | | | | | | | | | X | | | | | | | | | | | |

USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICPM02 Analysis Method: MS

Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | D/F | Time | 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 | | | |
| TUNE | 1.0 | 1402 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S0 | 1.0 | 1432 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S | 1.0 | 1437 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S10 | 1.0 | 1441 | | X | X | | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S50 | 1.0 | 1446 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S200 | 1.0 | 1450 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S500 | 1.0 | 1454 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| S2500 | 1.0 | 1459 | | X | X | X | X | X | | X | X | X | | X | | | | X | | | | | X | X | X | | | | |
| S5000 | 1.0 | 1503 | | X | X | X | X | X | | X | X | X | | X | | | | X | | | | | X | X | X | | | | |
| S50000 | 1.0 | 1508 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S100000 | 1.0 | 1512 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV1 | 1.0 | 1516 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| ICB1 | 1.0 | 1521 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| ICSA1 | 1.0 | 1525 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| ICSAB1 | 1.0 | 1530 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| CCV1 | 1.0 | 1534 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| CCB1 | 1.0 | 1538 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| PBS1 | 5.0 | 1543 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| LCS1 | 5.0 | 1547 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M21 | 5.0 | 1552 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M22 | 5.0 | 1556 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M23 | 5.0 | 1600 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M24 | 5.0 | 1605 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M25 | 5.0 | 1609 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M26 | 5.0 | 1613 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M27 | 5.0 | 1618 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M27S | 5.0 | 1622 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M27D | 5.0 | 1627 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| MF9M27A | 5.0 | 1631 | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF9M27L | 25 | 1635 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| CCV2 | 1.0 | 1640 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |
| CCB2 | 1.0 | 1644 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | | |

USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICPM02 Analysis Method: MS

Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | D/F | Time | 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 | | |
| MF9M28 | 5.0 | 1649 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M29 | 5.0 | 1653 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M30 | 5.0 | 1657 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M31 | 5.0 | 1702 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M32 | 5.0 | 1706 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M33 | 5.0 | 1711 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M34 | 5.0 | 1715 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M35 | 5.0 | 1719 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M37 | 5.0 | 1724 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M38 | 5.0 | 1728 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M39 | 5.0 | 1733 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M40 | 5.0 | 1737 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| MF9M41 | 5.0 | 1741 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| CCV3 | 1.0 | 1746 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |
| CCB3 | 1.0 | 1751 | | X | X | X | X | X | | X | X | X | | X | | | | X | | X | X | | X | X | X | | | |

USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICP08 Analysis Method: P

Start Date: 06/12/2015 End Date: 06/12/2015

| EPA Sample No. | D/F | Time | 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 | | |
| S0 | 1.0 | 1059 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| SA | 1.0 | 1102 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| SB | 1.0 | 1105 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| SC | 1.0 | 1107 | X | | | | | | | | | | X | | | X | | | | | | | | | | | | |
| SD | 1.0 | 1110 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| SE | 1.0 | 1113 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| SF | 1.0 | 1115 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| S500000 | 1.0 | 1119 | X | | | | | | X | | | | X | | X | | | | X | | | X | | | | | | |
| ICV1 | 1.0 | 1122 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| ICB1 | 1.0 | 1124 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| ICSA1 | 1.0 | 1127 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| ICSAB1 | 1.0 | 1130 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| CCV1 | 1.0 | 1133 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| CCB1 | 1.0 | 1136 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| PBS1 | 1.0 | 1139 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| LCS1 | 1.0 | 1142 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M21 | 1.0 | 1144 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M22 | 1.0 | 1147 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M23 | 1.0 | 1150 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M24 | 1.0 | 1153 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M25 | 1.0 | 1156 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M26 | 1.0 | 1159 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M27 | 1.0 | 1201 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M27S | 1.0 | 1204 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| MF9M27D | 1.0 | 1207 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M27L | 5.0 | 1210 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M28 | 1.0 | 1213 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M29 | 1.0 | 1215 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M30 | 1.0 | 1218 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M31 | 1.0 | 1221 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M32 | 1.0 | 1224 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M33 | 1.0 | 1227 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |

USEPA - CLP
13-IN
ANALYSIS RUN LOG

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICP08 Analysis Method: P

Start Date: 06/12/2015 End Date: 06/12/2015

| EPA Sample No. | D/F | Time | 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 | | |
| MF9M34 | 1.0 | 1229 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M35 | 1.0 | 1232 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M37 | 1.0 | 1235 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M38 | 1.0 | 1238 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M39 | 1.0 | 1241 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M40 | 1.0 | 1244 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| PBS2 | 1.0 | 1246 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| LCS2 | 1.0 | 1249 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| MF9M41 | 1.0 | 1252 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| CCV2 | 1.0 | 1255 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |
| CCB2 | 1.0 | 1258 | X | | | | | | X | | | | X | | X | X | | | X | | | X | | | | | | |

USEPA - CLP
14-IN
ICP-MS Tune

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Date: 06/17/2015

| Element - Mass | Avg. Measured Mass (amu) | Average Peak Width (amu) | %Height | %RSD |
|---|---|---|---|---|
| Be - 9 | 9.01 | 0.82 | 5 | 0.4 |
| Mg - 24 | 23.99 | 0.77 | 5 | 0.4 |
| Mg - 25 | 24.99 | 0.77 | 5 | 0.5 |
| Mg - 26 | 25.98 | 0.77 | 5 | 0.5 |
| Co - 59 | 58.93 | 0.77 | 5 | 0.1 |
| In - 113 | 112.90 | 0.82 | 5 | 0.6 |
| In - 115 | 114.90 | 0.82 | 5 | 0.4 |
| Pb - 206 | 205.97 | 0.76 | 5 | 0.8 |
| Pb - 207 | 206.98 | 0.76 | 5 | 0.7 |
| Pb - 208 | 207.98 | 0.76 | 5 | 0.9 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Comments:
Instrument manufacturer's specification for peak height is 0.65 to 0.85 amu with the peak width measured at 5% of the peak maximum.

USEPA - CLP
15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | Time | Internal Standards %RI For: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Element 6Li | Q | Element 45Sc | Q | Element 89Y | Q | Element 103Rh | Q | Element 159Tb | Q |
| S0 | 1432 | | | | | | | | | | |
| S | 1437 | | | | | | | | | | |
| S10 | 1441 | | | | | | | | | | |
| S50 | 1446 | | | | | | | | | | |
| S200 | 1450 | | | | | | | | | | |
| S500 | 1454 | | | | | | | | | | |
| S2500 | 1459 | | | | | | | | | | |
| S5000 | 1503 | | | | | | | | | | |
| S50000 | 1508 | | | | | | | | | | |
| S100000 | 1512 | | | | | | | | | | |
| ICV1 | 1516 | 103 | | 102 | | 96 | | 96 | | 96 | |
| ICB1 | 1521 | 105 | | 102 | | 97 | | 97 | | 97 | |
| ICSA1 | 1525 | 87 | | 90 | | 88 | | 85 | | 93 | |
| ICSAB1 | 1530 | 87 | | 92 | | 92 | | 89 | | 98 | |
| CCV1 | 1534 | 93 | | 96 | | 93 | | 91 | | 96 | |
| CCB1 | 1538 | 106 | | 104 | | 101 | | 101 | | 102 | |
| PBS1 | 1543 | 110 | | 107 | | 103 | | 103 | | 102 | |
| LCS1 | 1547 | 111 | | 107 | | 102 | | 102 | | 102 | |
| MF9M21 | 1552 | 102 | | 106 | | 104 | | 99 | | 99 | |
| MF9M22 | 1556 | 101 | | 105 | | 105 | | 99 | | 99 | |
| MF9M23 | 1600 | 101 | | 105 | | 104 | | 98 | | 98 | |
| MF9M24 | 1605 | 101 | | 105 | | 103 | | 97 | | 98 | |
| MF9M25 | 1609 | 101 | | 105 | | 104 | | 98 | | 98 | |
| MF9M26 | 1613 | 101 | | 106 | | 102 | | 96 | | 96 | |
| MF9M27 | 1618 | 102 | | 106 | | 107 | | 96 | | 96 | |
| MF9M27S | 1622 | 100 | | 105 | | 104 | | 94 | | 94 | |
| MF9M27D | 1627 | 101 | | 106 | | 104 | | 93 | | 94 | |
| MF9M27A | 1631 | 100 | | 104 | | 104 | | 93 | | 94 | |
| MF9M27L | 1635 | 102 | | 102 | | 100 | | 97 | | 97 | |
| CCV2 | 1640 | 94 | | 94 | | 88 | | 86 | | 88 | |
| CCB2 | 1644 | 105 | | 102 | | 96 | | 96 | | 97 | |
| MF9M28 | 1649 | 102 | | 106 | | 103 | | 97 | | 97 | |

USEPA - CLP
15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | Time | Internal Standards %RI For: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Element 209Bi | Q | Element | Q | Element | Q | Element | Q | Element | Q |
| S0 | 1432 | | | | | | | | | | |
| S | 1437 | | | | | | | | | | |
| S10 | 1441 | | | | | | | | | | |
| S50 | 1446 | | | | | | | | | | |
| S200 | 1450 | | | | | | | | | | |
| S500 | 1454 | | | | | | | | | | |
| S2500 | 1459 | | | | | | | | | | |
| S5000 | 1503 | | | | | | | | | | |
| S50000 | 1508 | | | | | | | | | | |
| S100000 | 1512 | | | | | | | | | | |
| ICV1 | 1516 | 98 | | | | | | | | | |
| ICB1 | 1521 | 98 | | | | | | | | | |
| ICSA1 | 1525 | 86 | | | | | | | | | |
| ICSAB1 | 1530 | 89 | | | | | | | | | |
| CCV1 | 1534 | 90 | | | | | | | | | |
| CCB1 | 1538 | 103 | | | | | | | | | |
| PBS1 | 1543 | 103 | | | | | | | | | |
| LCS1 | 1547 | 103 | | | | | | | | | |
| MF9M21 | 1552 | 98 | | | | | | | | | |
| MF9M22 | 1556 | 98 | | | | | | | | | |
| MF9M23 | 1600 | 97 | | | | | | | | | |
| MF9M24 | 1605 | 97 | | | | | | | | | |
| MF9M25 | 1609 | 97 | | | | | | | | | |
| MF9M26 | 1613 | 94 | | | | | | | | | |
| MF9M27 | 1618 | 94 | | | | | | | | | |
| MF9M27S | 1622 | 92 | | | | | | | | | |
| MF9M27D | 1627 | 92 | | | | | | | | | |
| MF9M27A | 1631 | 92 | | | | | | | | | |
| MF9M27L | 1635 | 97 | | | | | | | | | |
| CCV2 | 1640 | 84 | | | | | | | | | |
| CCB2 | 1644 | 98 | | | | | | | | | |
| MF9M28 | 1649 | 96 | | | | | | | | | |

USEPA - CLP
15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | Time | Internal Standards %RI For: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Element 6Li | Q | Element 45Sc | Q | Element 89Y | Q | Element 103Rh | Q | Element 159Tb | Q |
| MF9M29 | 1653 | 101 | | 107 | | 101 | | 94 | | 93 | |
| MF9M30 | 1657 | 101 | | 108 | | 105 | | 94 | | 93 | |
| MF9M31 | 1702 | 102 | | 104 | | 100 | | 94 | | 95 | |
| MF9M32 | 1706 | 102 | | 104 | | 104 | | 94 | | 94 | |
| MF9M33 | 1711 | 103 | | 104 | | 101 | | 95 | | 96 | |
| MF9M34 | 1715 | 104 | | 103 | | 98 | | 95 | | 95 | |
| MF9M35 | 1719 | 104 | | 103 | | 97 | | 95 | | 95 | |
| MF9M37 | 1724 | 103 | | 101 | | 97 | | 95 | | 95 | |
| MF9M38 | 1728 | 103 | | 102 | | 97 | | 94 | | 94 | |
| MF9M39 | 1733 | 103 | | 101 | | 96 | | 94 | | 95 | |
| MF9M40 | 1737 | 103 | | 101 | | 97 | | 93 | | 94 | |
| MF9M41 | 1741 | 105 | | 103 | | 98 | | 94 | | 94 | |
| CCV3 | 1746 | 94 | | 92 | | 85 | | 83 | | 86 | |
| CCB3 | 1751 | 106 | | 100 | | 93 | | 94 | | 94 | |

USEPA - CLP
15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

ICP-MS Instrument ID: ICPM02 Start Date: 06/17/2015 End Date: 06/17/2015

| EPA Sample No. | Time | Internal Standards %RI For: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Element 209Bi | Q | Element | Q | Element | Q | Element | Q | Element | Q |
| MF9M29 | 1653 | 92 | | | | | | | | | |
| MF9M30 | 1657 | 91 | | | | | | | | | |
| MF9M31 | 1702 | 93 | | | | | | | | | |
| MF9M32 | 1706 | 93 | | | | | | | | | |
| MF9M33 | 1711 | 95 | | | | | | | | | |
| MF9M34 | 1715 | 95 | | | | | | | | | |
| MF9M35 | 1719 | 95 | | | | | | | | | |
| MF9M37 | 1724 | 95 | | | | | | | | | |
| MF9M38 | 1728 | 95 | | | | | | | | | |
| MF9M39 | 1733 | 94 | | | | | | | | | |
| MF9M40 | 1737 | 94 | | | | | | | | | |
| MF9M41 | 1741 | 94 | | | | | | | | | |
| CCV3 | 1746 | 82 | | | | | | | | | |
| CCB3 | 1751 | 96 | | | | | | | | | |

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICP08 Start Date: 06/12/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.0 | 0.00075 | | 200 | 192 | 4 | 1000 | 986 | 1 |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | 0.0 | -0.77 | | 5000 | 5360 | -7 | 25000 | 26000 | -4 |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | 0.0 | -0.032 | | 100 | 118 | -18 | 1000 | 1030 | -3 |
| Lead | | | | | | | | | |
| Magnesium | 0.0 | -0.55 | | 5000 | 5360 | -7 | 25000 | 25600 | -2 |
| Manganese | 0.0 | -0.0026 | | 15.0 | 16.3 | -9 | 200 | 206 | -3 |
| Mercury | | | | | | | | | |
| Nickel | | | | | | | | | |
| Potassium | 0.0 | 0.35 | | 5000 | 4860 | 3 | 25000 | 23900 | 5 |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | 0.0 | -0.41 | | 5000 | 5140 | -3 | 25000 | 25400 | -2 |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICP08 Start Date: 06/12/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5000 | 5120 | -2 | 50000 | 50800 | -2 | 250000 | 258000 | -3 |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | 125000 | 129000 | -3 | 250000 | 259000 | -4 |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | 5000 | 5320 | -6 | 50000 | 51900 | -4 | 250000 | 257000 | -3 |
| Lead | | | | | | | | | |
| Magnesium | | | | 125000 | 126000 | -1 | 250000 | 255000 | -2 |
| Manganese | 2000 | 2110 | -5 | 5000 | 5030 | -1 | 25000 | 25000 | 0 |
| Mercury | | | | | | | | | |
| Nickel | | | | | | | | | |
| Potassium | | | | 125000 | 124000 | 1 | 250000 | 254000 | -2 |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | 125000 | 129000 | -3 | 250000 | 259000 | -4 |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
| | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICP08 Start Date: 06/12/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | 500000 | 491000 | 2 | | | |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | 500000 | 485000 | 3 | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | | | | 500000 | 491000 | 2 | | | |
| Lead | | | | | | | | | |
| Magnesium | | | | 500000 | 493000 | 1 | | | |
| Manganese | 50000 | 49900 | 0 | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | | | | | | | | | |
| Potassium | | | | 500000 | 498000 | 0 | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | 500000 | 487000 | 3 | | | |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICPM02 Start Date: 06/17/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | |
| Antimony | 0.0 | 0.0 | | 2.0 | 1.8 | 8 | 10.0 | 9.4 | 6 |
| Arsenic | 0.0 | 0.0 | | 1.0 | 0.77 | 23 | 10.0 | 9.7 | 3 |
| Barium | 0.0 | 0.0 | | 10.0 | 9.8 | 2 | | | |
| Beryllium | 0.0 | 0.0 | | 1.0 | 1.0 | -4 | 10.0 | 10.2 | -2 |
| Cadmium | 0.0 | 0.0 | | 1.0 | 0.94 | 6 | 10.0 | 9.6 | 4 |
| Calcium | | | | | | | | | |
| Chromium | 0.0 | 0.0 | | 2.0 | 1.9 | 5 | 10.0 | 9.6 | 4 |
| Cobalt | 0.0 | 0.0 | | 1.0 | 0.97 | 3 | 10.0 | 9.6 | 4 |
| Copper | 0.0 | 0.0 | | 2.0 | 1.9 | 3 | 10.0 | 9.9 | 1 |
| Iron | | | | | | | | | |
| Lead | 0.0 | 0.0 | | 1.0 | 0.95 | 5 | 10.0 | 9.5 | 5 |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | 0.0 | 0.0 | | 1.0 | 1.0 | 0 | 10.0 | 9.8 | 2 |
| Potassium | | | | | | | | | |
| Selenium | 0.0 | 0.0 | | 5.0 | 4.3 | 13 | 10.0 | 9.7 | 3 |
| Silver | 0.0 | 0.0 | | 1.0 | 1.0 | -2 | 10.0 | 9.9 | 1 |
| Sodium | | | | | | | | | |
| Thallium | 0.0 | 0.0 | | 1.0 | 0.94 | 6 | 10.0 | 9.4 | 6 |
| Vanadium | 0.0 | 0.0 | | 5.0 | 5.2 | -3 | 10.0 | 9.6 | 4 |
| Zinc | 0.0 | 0.0 | | 2.0 | 1.7 | 14 | 10.0 | 10.1 | -1 |
| Cyanide | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICPM02 Start Date: 06/17/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | |
| Antimony | 50.0 | 47.2 | 6 | 200 | 191 | 4 | 500 | 486 | 3 |
| Arsenic | 50.0 | 48.4 | 3 | 200 | 197 | 1 | 500 | 493 | 1 |
| Barium | 50.0 | 49.2 | 2 | 200 | 201 | 0 | 500 | 503 | -1 |
| Beryllium | 50.0 | 51.2 | -2 | 200 | 207 | -4 | 500 | 517 | -3 |
| Cadmium | 50.0 | 48.3 | 3 | 200 | 197 | 2 | 500 | 495 | 1 |
| Calcium | | | | | | | | | |
| Chromium | 50.0 | 48.6 | 3 | 200 | 198 | 1 | 500 | 508 | -2 |
| Cobalt | 50.0 | 48.3 | 3 | 200 | 199 | 1 | 500 | 509 | -2 |
| Copper | 50.0 | 49.6 | 1 | 200 | 203 | -2 | 500 | 518 | -4 |
| Iron | | | | | | | | | |
| Lead | 50.0 | 47.3 | 5 | 200 | 192 | 4 | 500 | 493 | 1 |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | 50.0 | 50.4 | -1 | 200 | 204 | -2 | 500 | 513 | -3 |
| Potassium | | | | | | | | | |
| Selenium | 50.0 | 49.3 | 1 | 200 | 200 | 0 | 500 | 500 | 0 |
| Silver | 50.0 | 49.4 | 1 | 200 | 204 | -2 | 500 | 498 | 0 |
| Sodium | | | | | | | | | |
| Thallium | 50.0 | 47.0 | 6 | 200 | 194 | 3 | 500 | 503 | -1 |
| Vanadium | 50.0 | 48.1 | 4 | 200 | 197 | 1 | 500 | 510 | -2 |
| Zinc | 50.0 | 50.2 | 0 | 200 | 204 | -2 | 500 | 512 | -2 |
| Cyanide | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: ICPM02 Start Date: 06/17/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | |
| Antimony | 2500 | 2500 | 0 | 5000 | 5000 | 0 | | | |
| Arsenic | 2500 | 2490 | 1 | 5000 | 5010 | 0 | | | |
| Barium | 2500 | 2520 | -1 | 5000 | 4990 | 0 | | | |
| Beryllium | 2500 | 2520 | -1 | 5000 | 4990 | 0 | | | |
| Cadmium | 2500 | 2490 | 0 | 5000 | 5000 | 0 | | | |
| Calcium | | | | | | | | | |
| Chromium | 2500 | 2500 | 0 | 5000 | 5000 | 0 | | | |
| Cobalt | 2500 | 2520 | -1 | 5000 | 4990 | 0 | | | |
| Copper | 2500 | 2530 | -1 | 5000 | 4990 | 0 | | | |
| Iron | | | | | | | | | |
| Lead | 2500 | 2480 | 1 | 5000 | 5010 | 0 | | | |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | | | | | | | | | |
| Nickel | 2500 | 2520 | -1 | 5000 | 4990 | 0 | | | |
| Potassium | | | | | | | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Thallium | 2500 | 2480 | 1 | 5000 | 5010 | 0 | | | |
| Vanadium | 2500 | 2510 | 0 | 5000 | 4990 | 0 | | | |
| Zinc | 2500 | 2550 | -2 | 5000 | 4970 | 1 | | | |
| Cyanide | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: AACV02 Start Date: 06/11/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | | | | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | | | | | | | | | |
| Lead | | | | | | | | | |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | 0.0 | -0.076 | | 0.20 | 0.15 | 25 | 0.50 | 0.47 | 6 |
| Nickel | | | | | | | | | |
| Potassium | | | | | | | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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Control Limits ±30

USEPA - CLP
16-IN
INITIAL CALIBRATION

Lab Name: ALS Environmental Contract: EPW09036

Lab Code: DATAC Case No.: 45299 Mod. Ref. No.: SDG No.: MF9M21

Instrument ID: AACV02 Start Date: 06/11/2015

Concentration Units: ug/L

| Analyte | True | Found | %D | True | Found | %D | True | Found | %D |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | |
| Antimony | | | | | | | | | |
| Arsenic | | | | | | | | | |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Cadmium | | | | | | | | | |
| Calcium | | | | | | | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | | | | | | | | | |
| Lead | | | | | | | | | |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Mercury | 1.0 | 0.97 | 3 | 5.0 | 5.4 | -7 | 10.0 | 9.8 | 2 |
| Nickel | | | | | | | | | |
| Potassium | | | | | | | | | |
| Selenium | | | | | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Thallium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | | | |
| Cyanide | | | | | | | | | |
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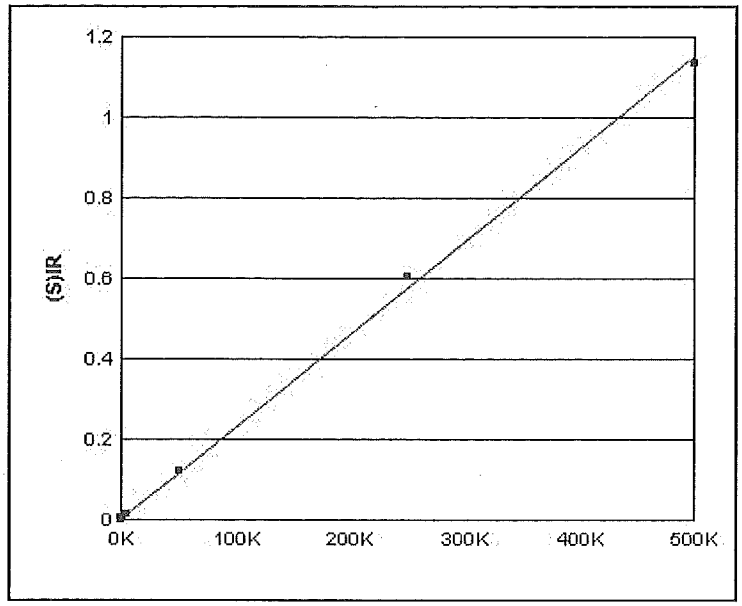
Control Limits ±30

| Run# | k15113 | Al3082 | Ca3179 | Fe2598 | Mg2790 | Mn2576 | K_7664 | Na5895 |
|---|---|---|---|---|---|---|---|---|
| | | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| S0 | 06/12/2015 10:59:17 | 0.00094 | 0.00278 | -0.00005 | -0.0001 | 0.00006 | -0.0008 | -0.0052 |
| SA | 06/12/2015 11:02:13 | 0.00139 | 0.29217 | 0.00172 | 0.01342 | 0.00179 | 0.09161 | 0.2569 |
| SB | 06/12/2015 11:05:07 | 0.00328 | 1.4059 | 0.01548 | 0.06439 | 0.022 | 0.45323 | 1.2886 |
| SC | 06/12/2015 11:07:54 | 0.0134 | | 0.07977 | | 0.22429 | | |
| SD | 06/12/2015 11:10:33 | 0.11964 | 6.9836 | 0.77763 | 0.31732 | 0.53517 | 2.351 | 6.554 |
| SE | 06/12/2015 11:13:08 | 0.60296 | 13.988 | 3.8543 | 0.6425 | 2.6616 | 4.837 | 13.189 |
| SF | 06/12/2015 11:15:57 | | | | | 5.3082 | | |
| S500000 | 06/12/2015 11:19:07 | 1.1333 | 26.188 | 7.3587 | 1.2431 | | 9.4769 | 24.81 |
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| ICV1 | 06/12/2015 11:22:07 | 2571.9 | 10908 | 5495 | 6282.9 | 520.13 | 10010 | 10468 |
| ICB1 | 06/12/2015 11:24:49 | -38.934 | 4.4403 | 10.545 | 25.392 | 0.19318 | 48.337 | 56.069 |
| ICSA1 | 06/12/2015 11:27:45 | 259120 | 261550 | 105560 | 266930 | 16.521 | 46.344 | 70.895 |
| ICSAB1 | 06/12/2015 11:30:37 | 252600 | 257630 | 103940 | 261260 | 526.31 | 72.564 | 105.57 |
| CCV1 | 06/12/2015 11:33:18 | 232650 | 240030 | 242610 | 236710 | 22798 | 242330 | 243400 |
| CCB1 | 06/12/2015 11:36:07 | 23.38 | 30.737 | 46.506 | 27.979 | 3.0557 | 109.56 | 69.269 |
| PBS1 | 06/12/2015 11:39:04 | -5.0667 | 107.08 | 20.682 | 2.6678 | 0.58338 | 24.599 | 59.533 |
| LCS1 | 06/12/2015 11:42:01 | 408.21 | 10227 | 209.29 | 9789.8 | 28.823 | 9438.1 | 9815.1 |
| MF9M21 | 06/12/2015 11:44:55 | 30850 | 19062 | 63494 | 5761.3 | 1461.9 | 5317.1 | 156.3 |
| MF9M22 | 06/12/2015 11:47:47 | 34438 | 17149 | 75547 | 4365.6 | 1792.8 | 5168.4 | 174.4 |
| MF9M23 | 06/12/2015 11:50:37 | 32255 | 3604.6 | 50537 | 2914.3 | 224.19 | 4465.3 | 152.75 |
| MF9M24 | 06/12/2015 11:53:30 | 48909 | 5899.4 | 85336 | 4881.9 | 578.03 | 6207.6 | 180.14 |
| MF9M25 | 06/12/2015 11:56:20 | 55461 | 28963 | 96222 | 8456 | 2296.6 | 7698.1 | 317.32 |
| MF9M26 | 06/12/2015 11:59:10 | 88492 | 76372 | 143340 | 11223 | 1575.3 | 8712.4 | 652.64 |
| MF9M27 | 06/12/2015 12:01:57 | 78538 | 17185 | 116790 | 10638 | 902.8 | 7277.8 | 524.81 |
| MF9M27S | 06/12/2015 12:04:47 | 103600 | 18758 | 135320 | 12287 | 1961.2 | 9089.6 | 519.39 |
| MF9M27D | 06/12/2015 12:07:28 | 133040 | 17634 | 182050 | 15867 | 1017.3 | 11653 | 637.65 |
| MF9M27L | 06/12/2015 12:10:14 | 14950 | 3330.6 | 22463 | 2011.7 | 172.69 | 1374.7 | 119.9 |
| MF9M28 | 06/12/2015 12:13:07 | 102320 | 25564 | 159900 | 13898 | 1008.1 | 10933 | 683.15 |
| MF9M29 | 06/12/2015 12:15:54 | 92836 | 32833 | 149100 | 13466 | 2418.1 | 8219.5 | 962.48 |
| MF9M30 | 06/12/2015 12:18:43 | 104100 | 27757 | 186250 | 15319 | 3362.4 | 7595.3 | 1065.9 |
| MF9M31 | 06/12/2015 12:21:29 | 68885 | 57765 | 105190 | 10876 | 1903.5 | 9268.3 | 321.72 |
| MF9M32 | 06/12/2015 12:24:20 | 146690 | 31137 | 208820 | 15643 | 2067.9 | 14091 | 543.6 |
| MF9M33 | 06/12/2015 12:27:06 | 50829 | 14876 | 96840 | 6342.1 | 1014.8 | 5438.1 | 258.76 |
| MF9M34 | 06/12/2015 12:29:57 | 23844 | 12061 | 36611 | 2997.7 | 2251.8 | 4052.7 | 125.13 |
| MF9M35 | 06/12/2015 12:32:46 | 21213 | 11207 | 34464 | 2837.1 | 2077.1 | 3723.5 | 104.59 |
| MF9M37 | 06/12/2015 12:35:36 | 19211 | 23930 | 35315 | 3466.7 | 2576.5 | 3842.4 | 119.26 |
| MF9M38 | 06/12/2015 12:38:26 | 19329 | 16473 | 27125 | 2639.9 | 1188.2 | 2817.4 | 109.98 |
| MF9M39 | 06/12/2015 12:41:15 | 29455 | 129290 | 49551 | 18860 | 2276.4 | 4948.5 | 298.97 |
| MF9M40 | 06/12/2015 12:44:05 | 33944 | 54553 | 50656 | 7398.4 | 2870.5 | 5961.3 | 191.23 |
| PBS2 | 06/12/2015 12:46:54 | 3.2936 | 114.49 | 13.752 | 48.009 | 0.34884 | 73.892 | 20.125 |
| LCS2 | 06/12/2015 12:49:51 | 392.29 | 10833 | 230.62 | 10352 | 30.556 | 10156 | 10411 |
| MF9M41 | 06/12/2015 12:52:45 | 30878 | 8391.9 | 67606 | 2637.4 | 2416.1 | 4111.1 | 172.99 |
| CCV2 | 06/12/2015 12:55:35 | 245310 | 254000 | 257750 | 249960 | 24117 | 261480 | 258970 |
| CCB2 | 06/12/2015 12:58:28 | -10.749 | 27.61 | 37.822 | 14.83 | 2.6527 | 50.674 | 48.101 |

# Calibration curves for k15113

Author: Joanna Sanchez
Published: 06/19/2015 00:11:49
Method Name: ICP08 ISM01.3 2015 (8)

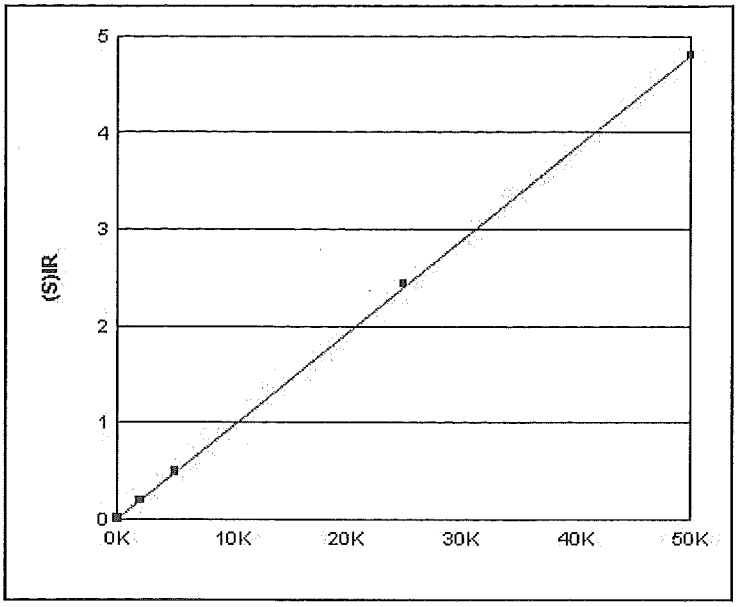



| | |
|---|---|
| **Element Name:** | Al |
| **Element Wavelength:** | Al 308.215 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99976 |
| **A0 (Offset):** | 0.00093633 |
| **A1 (Gain):** | 0.0000023044 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.00074836 | 0.00074836 | 0.00000 | 0.00093634 | 0.00010248 | 1 |
| SA | 200.00 | 191.52 | -8.4840 | -4.2420 | 0.0013943 | 0.000056060 | 1 |
| SB | 1,000.00 | 986.49 | -13.513 | -1.3513 | 0.0032768 | 0.000093801 | 1 |
| SC | 5,000.0 | 5,116.4 | 116.43 | 2.3287 | 0.013398 | 0.000082243 | 1 |
| SD | 50,000 | 50,785 | 784.86 | 1.5697 | 0.11964 | 0.00081331 | 1 |
| SE | 250,000 | 257,610 | 7,611.5 | 3.0446 | 0.60296 | 0.0025567 | 1 |
| S500000 | 500,000 | 491,380 | -8,619.4 | -1.7239 | 1.1333 | 0.0030560 | 1 |

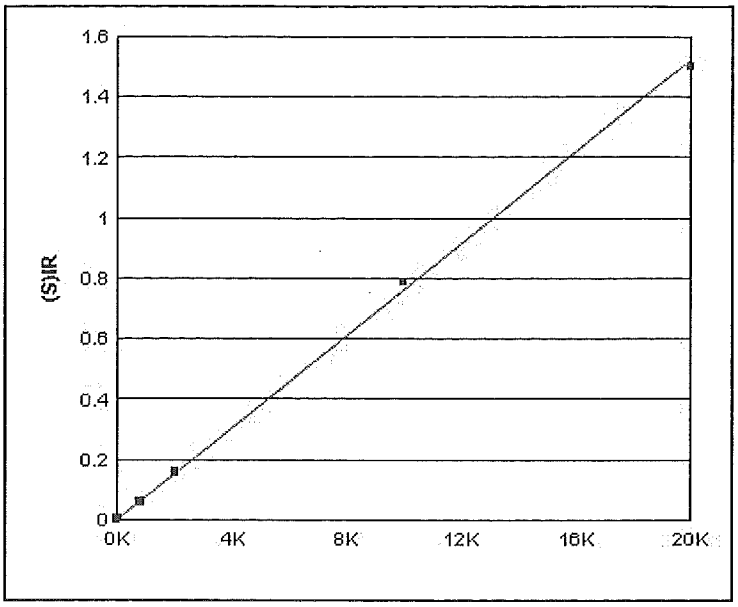



| | |
|---|---|
| **Element Name:** | Sb |
| **Element Wavelength:** | Sb 206.833 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99997 |
| **A0 (Offset):** | 0.000077642 |
| **A1 (Gain):** | 0.000096253 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.0011489 | 0.0011489 | 0.00000 | 0.000077753 | 0.00035788 | 1 |
| SA | 60.000 | 60.227 | 0.22719 | 0.37866 | 0.0058775 | 0.00018224 | 1 |
| SB | 200.00 | 197.34 | -2.6612 | -1.3306 | 0.019148 | 0.00051014 | 1 |
| SC | 2,000.0 | 1,955.9 | -44.093 | -2.2047 | 0.18908 | 0.00052772 | 1 |
| SD | 5,000.0 | 5,033.6 | 33.615 | 0.67230 | 0.48655 | 0.00047041 | 1 |
| SE | 25,000 | 25,272 | 271.87 | 1.0875 | 2.4424 | 0.010796 | 1 |
| SF | 50,000 | 49,741 | -259.06 | -0.51811 | 4.8059 | 0.11646 | 1 |

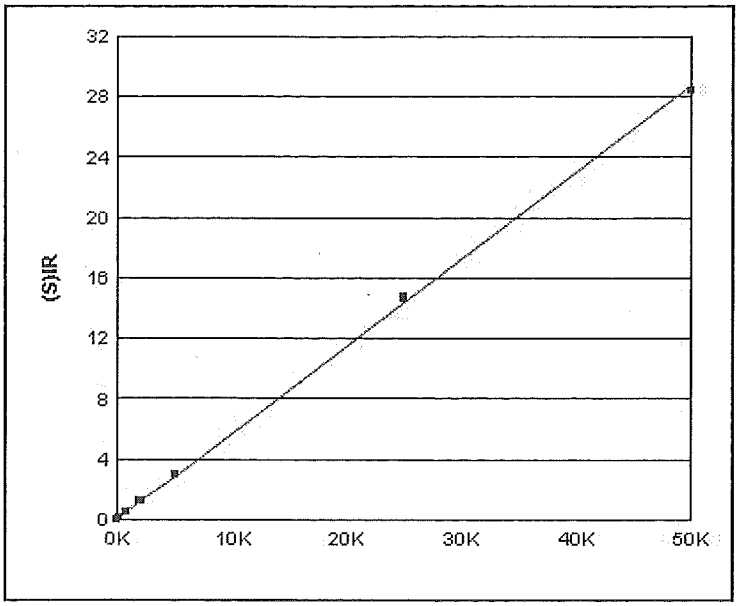



| | |
|---|---|
| **Element Name:** | As |
| **Element Wavelength:** | As 189.042 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99972 |
| **A0 (Offset):** | 0.00015413 |
| **A1 (Gain):** | 0.000076148 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.0011848 | 0.0011848 | 0.00000 | 0.00015422 | 0.00036483 | 1 |
| SA | 10.000 | 9.3524 | -0.64759 | -6.4759 | 0.00086727 | 0.000028219 | 1 |
| SB | 80.000 | 76.611 | -3.3885 | -4.2356 | 0.0059971 | 0.00034125 | 1 |
| SC | 800.00 | 760.13 | -39.867 | -4.9834 | 0.058131 | 0.00043418 | 1 |
| SD | 2,000.0 | 2,044.8 | 44.775 | 2.2388 | 0.15608 | 0.00054346 | 1 |
| SE | 10,000 | 10,322 | 322.47 | 3.2247 | 0.78727 | 0.0042777 | 1 |
| SF | 20,000 | 19,677 | -323.28 | -1.6164 | 1.5009 | 0.037987 | 1 |

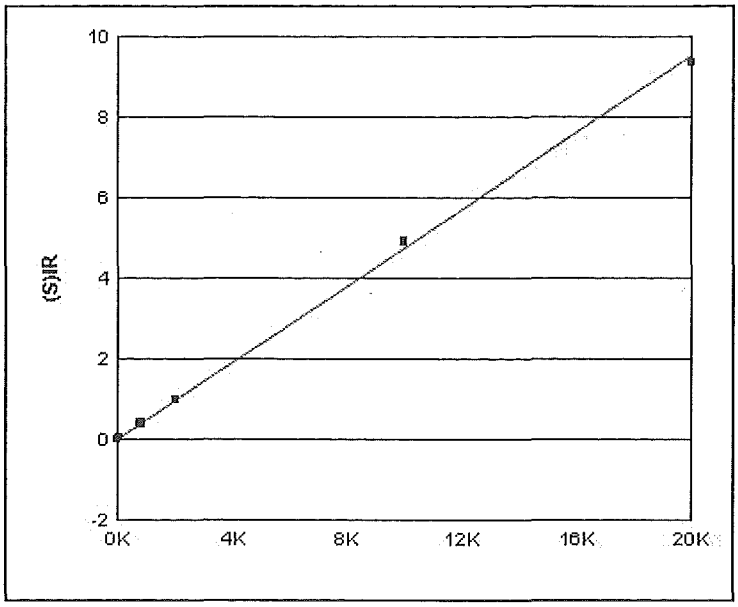



| | |
|---|---|
| **Element Name:** | Ba |
| **Element Wavelength:** | Ba 455.403 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99982 |
| **A0 (Offset):** | 0.0032364 |
| **A1 (Gain):** | 0.00057596 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| Reslope | | QC Normalize | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.044730 | -0.044730 | 0.00000 | 0.0032107 | 0.00031832 | 1 |
| SA | 200.00 | 218.09 | 18.086 | 9.0428 | 0.12885 | 0.00056697 | 1 |
| SB | 750.00 | 791.84 | 41.844 | 5.5792 | 0.45931 | 0.0018864 | 1 |
| SC | 2,000.0 | 2,100.0 | 100.02 | 5.0012 | 1.2128 | 0.0022743 | 1 |
| SD | 5,000.0 | 5,120.2 | 120.17 | 2.4033 | 2.9523 | 0.022005 | 1 |
| SE | 25,000 | 25,449 | 449.20 | 1.7968 | 14.661 | 0.13928 | 1 |
| SF | 50,000 | 49,271 | -729.32 | -1.4586 | 28.381 | 0.25015 | 1 |

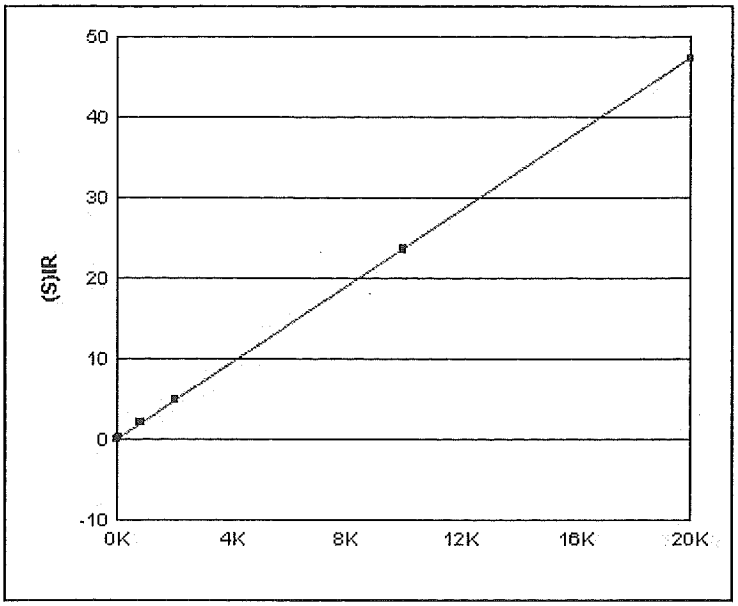



| | |
|---|---|
| **Element Name:** | Be |
| **Element Wavelength:** | Be 313.107 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99973 |
| **A0 (Offset):** | -0.000042910 |
| **A1 (Gain):** | 0.00047538 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00084670 | -0.00084670 | 0.00000 | -0.000043313 | 0.00015570 | 1 |
| SA | 5.0000 | 5.4315 | 0.43147 | 8.6294 | 0.0025449 | 0.000096961 | 1 |
| SB | 80.000 | 81.597 | 1.5966 | 1.9958 | 0.038769 | 0.00020031 | 1 |
| SC | 800.00 | 819.35 | 19.351 | 2.4189 | 0.38969 | 0.0017207 | 1 |
| SD | 2,000.0 | 2,055.9 | 55.914 | 2.7957 | 0.97787 | 0.0052608 | 1 |
| SE | 10,000 | 10,296 | 296.14 | 2.9614 | 4.8974 | 0.024493 | 1 |
| SF | 20,000 | 19,627 | -373.43 | -1.8672 | 9.3358 | 0.031929 | 1 |

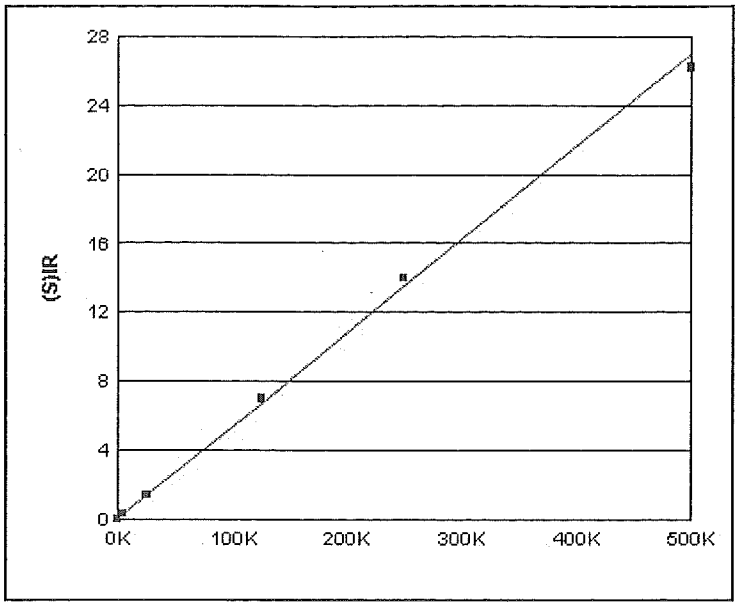



| | |
|---|---|
| **Element Name:** | Cd |
| **Element Wavelength:** | Cd 214.438 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99995 |
| **A0 (Offset):** | -0.00034272 |
| **A1 (Gain):** | 0.0023665 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00085951 | -0.00085951 | 0.00000 | -0.00034475 | 0.000096275 | 1 |
| SA | 5.0000 | 5.3888 | 0.38879 | 7.7758 | 0.012415 | 0.00027274 | 1 |
| SB | 80.000 | 82.633 | 2.6327 | 3.2909 | 0.19527 | 0.00037060 | 1 |
| SC | 800.00 | 829.84 | 29.843 | 3.7304 | 1.9638 | 0.0092832 | 1 |
| SD | 2,000.0 | 2,062.0 | 62.028 | 3.1014 | 4.8825 | 0.0038007 | 1 |
| SE | 10,000 | 9,953.3 | -46.737 | -0.46737 | 23.569 | 0.11854 | 1 |
| SF | 20,000 | 19,952 | -48.171 | -0.24085 | 47.216 | 1.3150 | 1 |

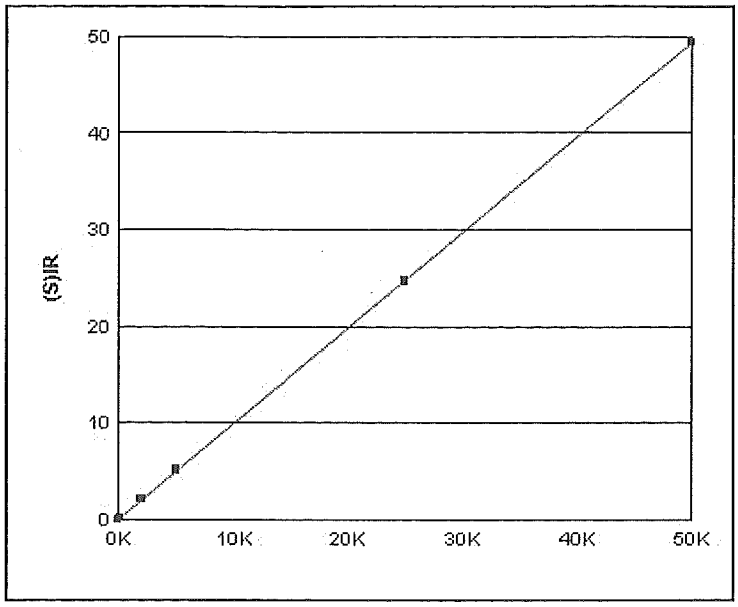



| | |
|---|---|
| **Element Name:** | Ca |
| **Element Wavelength:** | Ca 317.933 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99945 |
| **A0 (Offset):** | 0.0028206 |
| **A1 (Gain):** | 0.000053971 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.76873 | -0.76873 | 0.00000 | 0.0027791 | 0.00023873 | 1 |
| SA | 5,000.0 | 5,361.3 | 361.32 | 7.2263 | 0.29217 | 0.0011753 | 1 |
| SB | 25,000 | 25,997 | 997.44 | 3.9897 | 1.4059 | 0.00045873 | 1 |
| SD | 125,000 | 129,340 | 4,344.4 | 3.4755 | 6.9836 | 0.032288 | 1 |
| SE | 250,000 | 259,120 | 9,118.2 | 3.6473 | 13.988 | 0.091126 | 1 |
| S500000 | 500,000 | 485,180 | -14,821 | -2.9643 | 26.188 | 0.27167 | 1 |

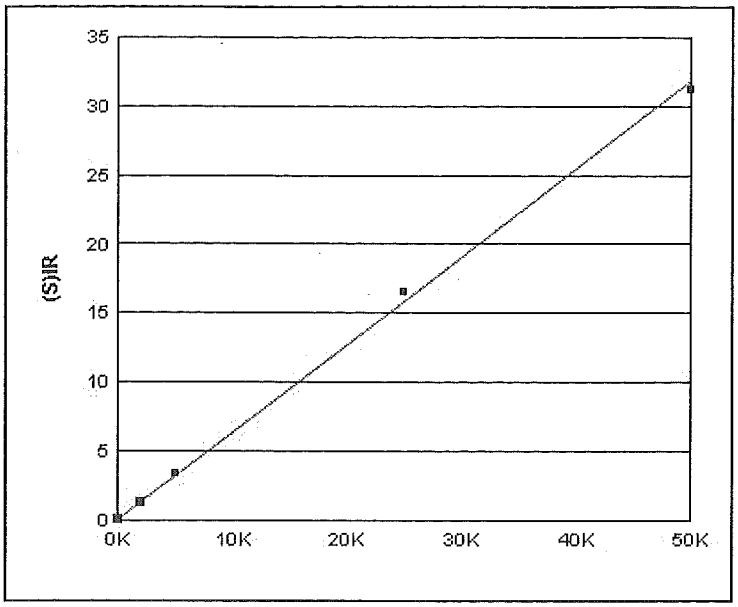



| | |
|---|---|
| **Element Name:** | Cr |
| **Element Wavelength:** | Cr 205.552 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99997 |
| **A0 (Offset):** | 0.00034457 |
| **A1 (Gain):** | 0.00098894 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00091147 | -0.00091147 | 0.00000 | 0.00034367 | 0.00020550 | 1 |
| SA | 10.000 | 10.266 | 0.26553 | 2.6553 | 0.010506 | 0.00026353 | 1 |
| SB | 200.00 | 203.14 | 3.1421 | 1.5710 | 0.20132 | 0.00020067 | 1 |
| SC | 2,000.0 | 2,059.6 | 59.594 | 2.9797 | 2.0379 | 0.0066104 | 1 |
| SD | 5,000.0 | 5,121.0 | 120.98 | 2.4196 | 5.0667 | 0.0074033 | 1 |
| SE | 25,000 | 24,929 | -71.476 | -0.28590 | 24.663 | 0.12279 | 1 |
| SF | 50,000 | 49,887 | -112.50 | -0.22501 | 49.356 | 1.5722 | 1 |

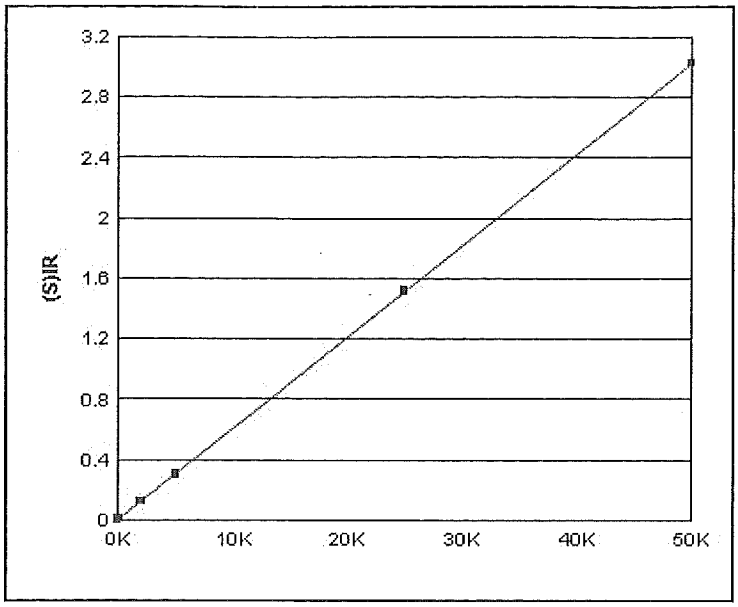



| | |
|---|---|
| **Element Name:** | Co |
| **Element Wavelength:** | Co 228.616 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99960 |
| **A0 (Offset):** | 0.000058720 |
| **A1 (Gain):** | 0.00063649 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0029005 | -0.0029005 | 0.00000 | 0.000056874 | 0.00048341 | 1 |
| SA | 50.000 | 50.731 | 0.73117 | 1.4623 | 0.032409 | 0.00018294 | 1 |
| SB | 200.00 | 198.33 | -1.6712 | -0.83559 | 0.12649 | 0.00079398 | 1 |
| SC | 2,000.0 | 1,987.7 | -12.272 | -0.61361 | 1.2664 | 0.0048316 | 1 |
| SD | 5,000.0 | 5,220.9 | 220.86 | 4.4171 | 3.3263 | 0.011674 | 1 |
| SE | 25,000 | 25,893 | 893.17 | 3.5727 | 16.497 | 0.068450 | 1 |
| SF | 50,000 | 48,899 | -1,101.0 | -2.2020 | 31.151 | 0.83789 | 1 |

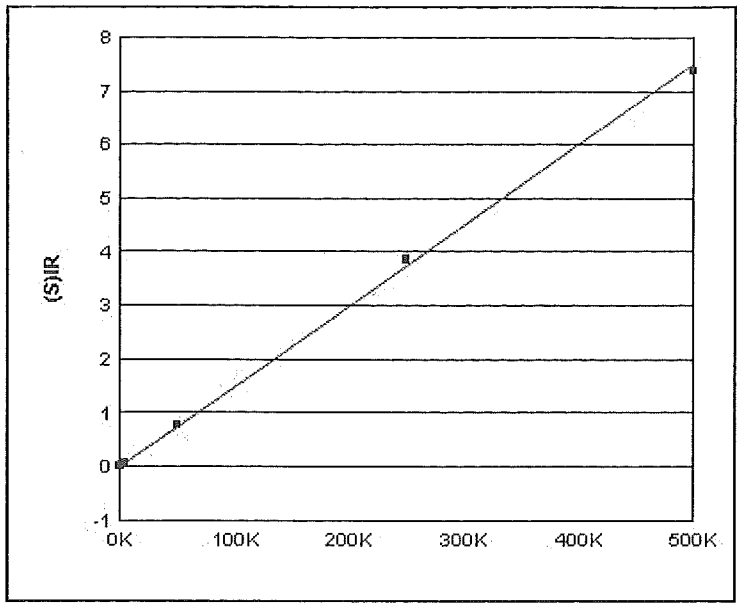



| | |
|---|---|
| **Element Name:** | Cu |
| **Element Wavelength:** | Cu 327.396 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 1.00000 |
| **A0 (Offset):** | 0.00050340 |
| **A1 (Gain):** | 0.000060502 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.00096708 | 0.00096708 | 0.00000 | 0.00050346 | 0.000043103 | 1 |
| SA | 25.000 | 24.763 | -0.23747 | -0.94990 | 0.0020013 | 0.000013959 | 1 |
| SB | 200.00 | 194.11 | -5.8892 | -2.9446 | 0.012245 | 0.00010972 | 1 |
| SC | 2,000.0 | 2,012.0 | 11.980 | 0.59901 | 0.12221 | 0.00088122 | 1 |
| SD | 5,000.0 | 4,961.3 | -38.653 | -0.77305 | 0.30062 | 0.0016367 | 1 |
| SE | 25,000 | 25,067 | 67.303 | 0.26921 | 1.5168 | 0.0092453 | 1 |
| SF | 50,000 | 49,965 | -34.504 | -0.069008 | 3.0229 | 0.036302 | 1 |

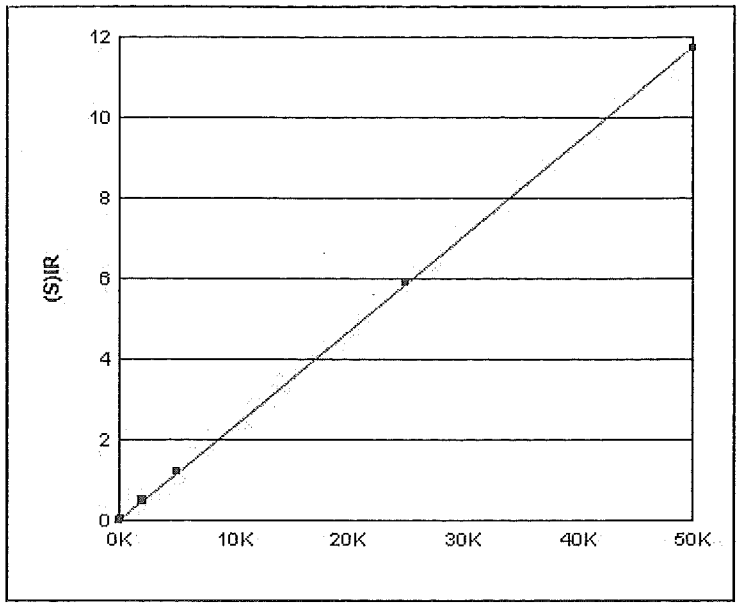



| | |
|---|---|
| **Element Name:** | Fe |
| **Element Wavelength:** | Fe 259.837 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99972 |
| **A0 (Offset):** | -0.000046453 |
| **A1 (Gain):** | 0.000014994 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| Reslope | | QC Normalize | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.032344 | -0.032344 | 0.00000 | -0.000046938 | 0.00017377 | 1 |
| SA | 100.00 | 117.87 | 17.865 | 17.865 | 0.0017214 | 0.00010782 | 1 |
| SB | 1,000.00 | 1,034.6 | 34.642 | 3.4642 | 0.015475 | 0.000025932 | 1 |
| SC | 5,000.0 | 5,317.8 | 317.82 | 6.3564 | 0.079773 | 0.00047487 | 1 |
| SD | 50,000 | 51,853 | 1,852.6 | 3.7052 | 0.77763 | 0.0026398 | 1 |
| SE | 250,000 | 256,990 | 6,991.8 | 2.7967 | 3.8543 | 0.031544 | 1 |
| S500000 | 500,000 | 490,780 | -9,217.6 | -1.8435 | 7.3587 | 0.021529 | 1 |

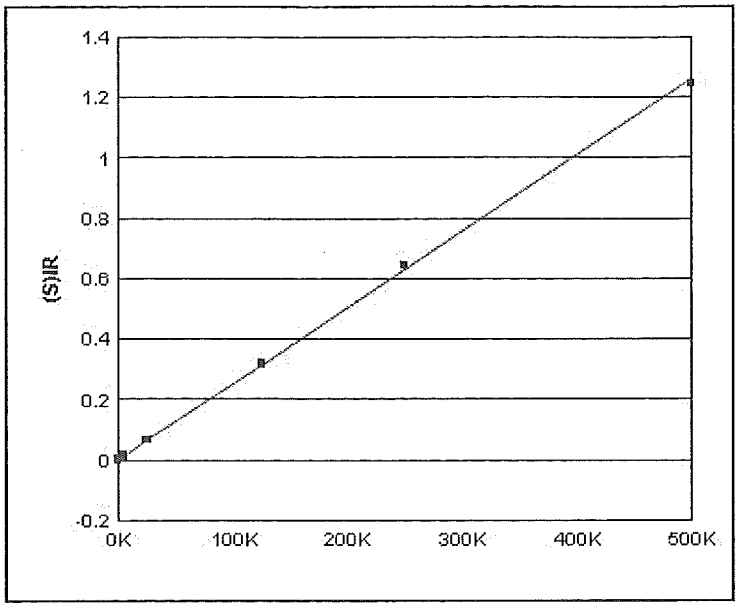



| | |
|---|---|
| **Element Name:** | Pb |
| **Element Wavelength:** | Pb 220.353 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99998 |
| **A0 (Offset):** | 0.0013422 |
| **A1 (Gain):** | 0.00023475 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00044823 | -0.00044823 | 0.00000 | 0.0013421 | 0.00054482 | 1 |
| SA | 10.000 | 10.289 | 0.28856 | 2.8856 | 0.0037758 | 0.00041599 | 1 |
| SB | 200.00 | 199.11 | -0.88509 | -0.44254 | 0.048189 | 0.00044021 | 1 |
| SC | 2,000.0 | 2,001.4 | 1.4461 | 0.072307 | 0.47192 | 0.0027907 | 1 |
| SD | 5,000.0 | 5,101.0 | 100.99 | 2.0198 | 1.2029 | 0.0040404 | 1 |
| SE | 25,000 | 25,076 | 75.903 | 0.30361 | 5.9086 | 0.027736 | 1 |
| SF | 50,000 | 49,822 | -178.21 | -0.35641 | 11.708 | 0.28122 | 1 |

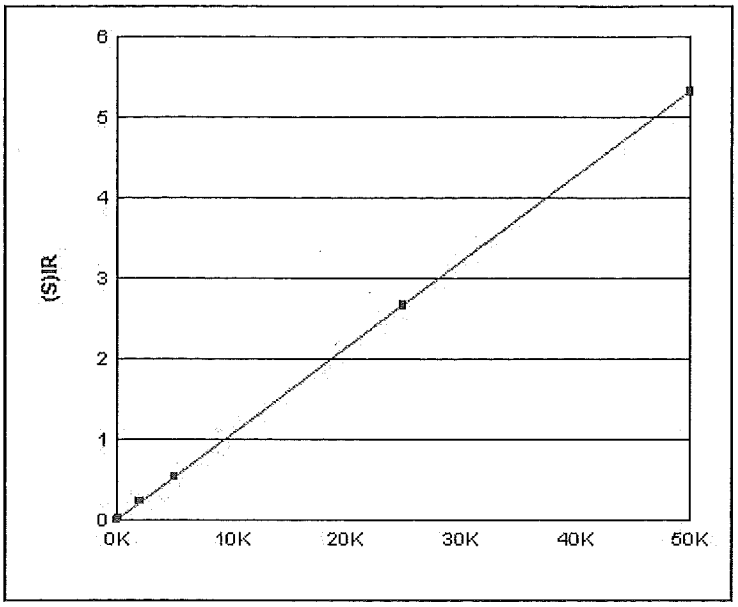



| | |
|---|---|
| **Element Name:** | Mg |
| **Element Wavelength:** | Mg 279.079 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99987 |
| **A0 (Offset):** | -0.000094549 |
| **A1 (Gain):** | 0.0000025206 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.54579 | -0.54579 | 0.00000 | -0.000095924 | 0.000045769 | 1 |
| SA | 5,000.0 | 5,361.3 | 361.26 | 7.2252 | 0.013419 | 0.000062383 | 1 |
| SB | 25,000 | 25,584 | 584.27 | 2.3371 | 0.064394 | 0.00023156 | 1 |
| SD | 125,000 | 125,930 | 926.45 | 0.74116 | 0.31732 | 0.0017753 | 1 |
| SE | 250,000 | 254,930 | 4,933.5 | 1.9734 | 0.64250 | 0.0040114 | 1 |
| S500000 | 500,000 | 493,190 | -6,805.5 | -1.3611 | 1.2431 | 0.0031746 | 1 |

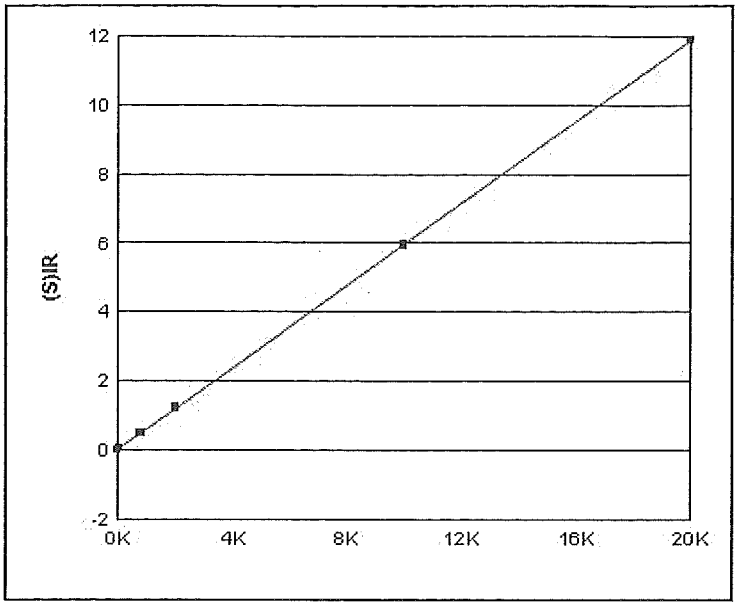



| | |
|---|---|
| **Element Name:** | Mn |
| **Element Wavelength:** | Mn 257.610 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99996 |
| **A0 (Offset):** | 0.000056647 |
| **A1 (Gain):** | 0.00010646 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0026213 | -0.0026213 | 0.00000 | 0.000056368 | 0.000058050 | 1 |
| SA | 15.000 | 16.327 | 1.3267 | 8.8447 | 0.0017948 | 0.00013282 | 1 |
| SB | 200.00 | 206.14 | 6.1396 | 3.0698 | 0.022002 | 0.00016643 | 1 |
| SC | 2,000.0 | 2,106.3 | 106.26 | 5.3129 | 0.22429 | 0.00025665 | 1 |
| SD | 5,000.0 | 5,026.4 | 26.424 | 0.52849 | 0.53517 | 0.0036300 | 1 |
| SE | 25,000 | 25,000 | -0.26238 | -0.0010495 | 2.6616 | 0.013322 | 1 |
| SF | 50,000 | 49,860 | -139.89 | -0.27977 | 5.3082 | 0.042460 | 1 |

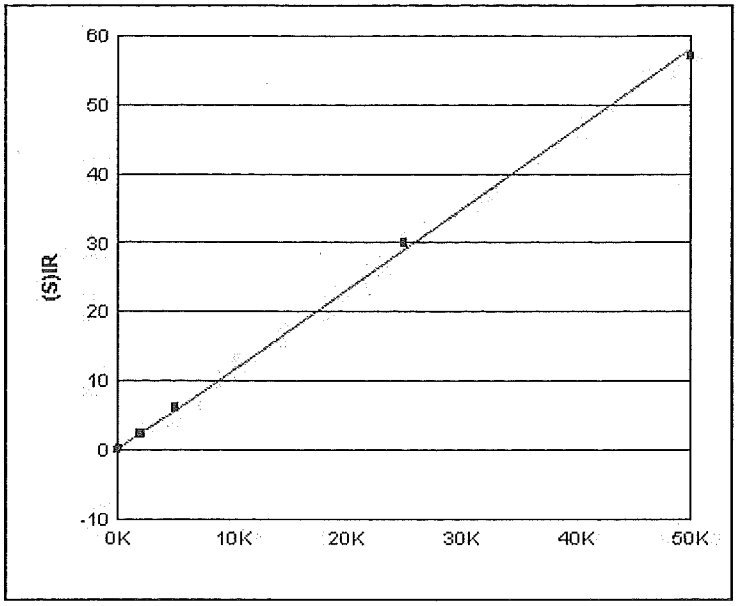



| | |
|---|---|
| **Element Name:** | Mo |
| **Element Wavelength:** | Mo 202.030 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99998 |
| **A0 (Offset):** | -0.00018189 |
| **A1 (Gain):** | 0.00059527 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

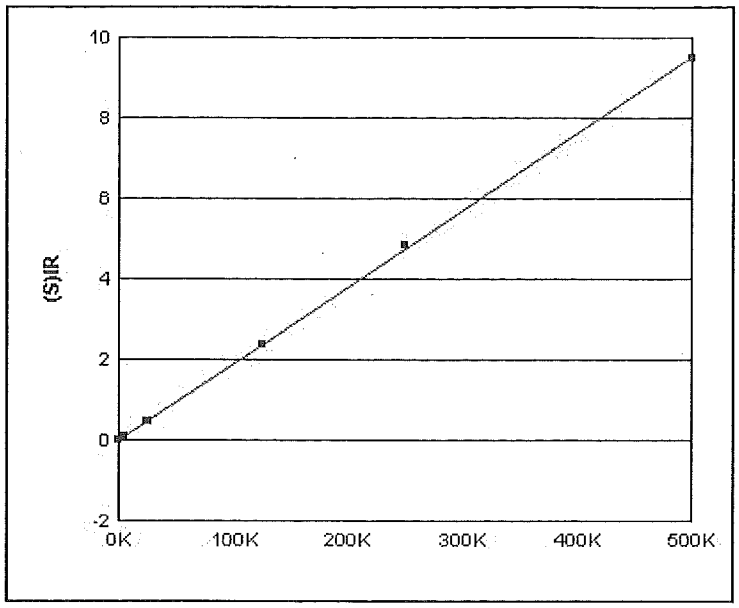
| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00046375 | -0.00046375 | 0.00000 | -0.00018217 | 0.00018107 | 1 |
| SA | 10.000 | 10.211 | 0.21143 | 2.1143 | 0.0058962 | 0.00031669 | 1 |
| SB | 80.000 | 81.068 | 1.0680 | 1.3350 | 0.048071 | 0.00026858 | 1 |
| SC | 800.00 | 794.21 | -5.7857 | -0.72321 | 0.47257 | 0.0024792 | 1 |
| SD | 2,000.0 | 2,043.4 | 43.363 | 2.1681 | 1.2159 | 0.0014569 | 1 |
| SE | 10,000 | 9,987.5 | -12.505 | -0.12505 | 5.9439 | 0.027153 | 1 |
| SF | 20,000 | 19,974 | -26.346 | -0.13173 | 11.890 | 0.35415 | 1 |




| | |
|---|---|
| **Element Name:** | Ni |
| **Element Wavelength:** | Ni 231.604 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99967 |
| **A0 (Offset):** | -0.0012459 |
| **A1 (Gain):** | 0.0011615 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0037278 | -0.0037278 | 0.00000 | -0.0012502 | 0.00034216 | 1 |
| SA | 40.000 | 41.692 | 1.6923 | 4.2307 | 0.047219 | 0.00041664 | 1 |
| SB | 200.00 | 200.16 | 0.16370 | 0.081851 | 0.23143 | 0.0011011 | 1 |
| SC | 2,000.0 | 1,989.8 | -10.207 | -0.51034 | 2.3114 | 0.0079355 | 1 |
| SD | 5,000.0 | 5,218.0 | 218.02 | 4.3604 | 6.0661 | 0.026909 | 1 |
| SE | 25,000 | 25,789 | 788.70 | 3.1548 | 29.985 | 0.12150 | 1 |
| SF | 50,000 | 49,001 | -999.01 | -1.9980 | 56.942 | 1.5156 | 1 |

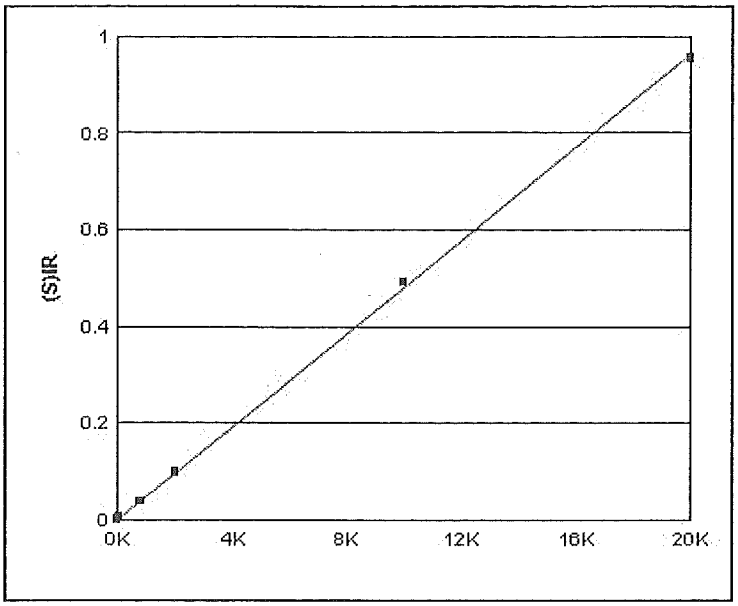



| | |
|---|---|
| **Element Name:** | K |
| **Element Wavelength:** | K 766.490 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99992 |
| **A0 (Offset):** | -0.00080728 |
| **A1 (Gain):** | 0.000019021 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.35150 | 0.35150 | 0.00000 | -0.00080059 | 0.00081274 | 1 |
| SA | 5,000.0 | 4,858.9 | -141.14 | -2.8227 | 0.091612 | 0.0017725 | 1 |
| SB | 25,000 | 23,871 | -1,129.2 | -4.5167 | 0.45323 | 0.00092360 | 1 |
| SD | 125,000 | 123,640 | -1,355.3 | -1.0842 | 2.3510 | 0.0070853 | 1 |
| SE | 250,000 | 254,340 | 4,342.9 | 1.7371 | 4.8370 | 0.044237 | 1 |
| S500000 | 500,000 | 498,280 | -1,717.3 | -0.34346 | 9.4769 | 0.013607 | 1 |

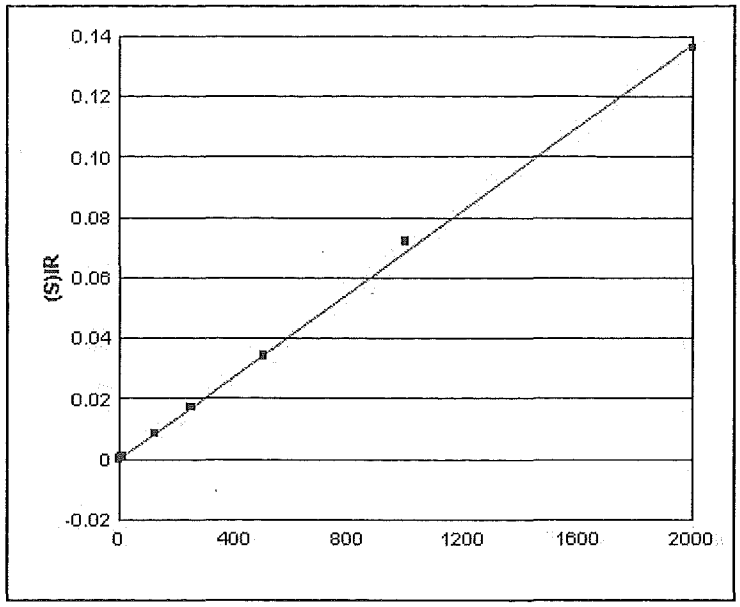



| | |
|---|---|
| **Element Name:** | Se |
| **Element Wavelength:** | Se 196.090 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99989 |
| **A0 (Offset):** | 0.00031120 |
| **A1 (Gain):** | 0.000048140 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

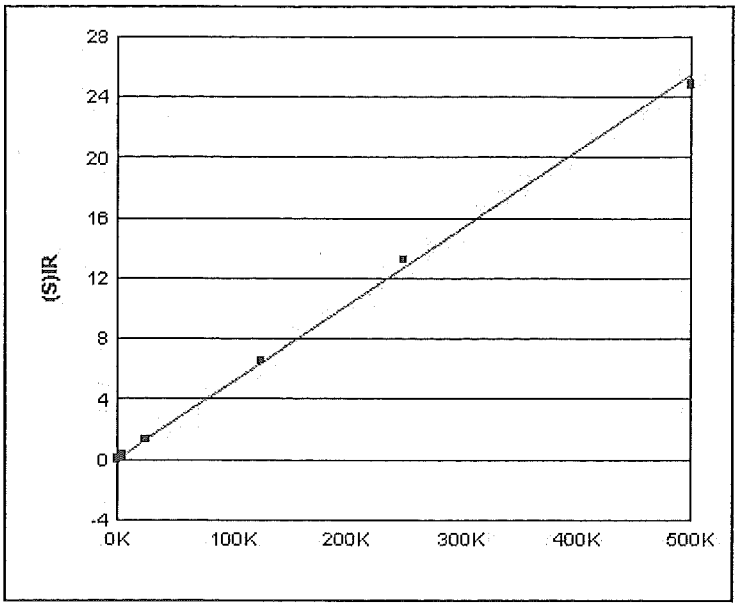
| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | 0.0014309 | 0.0014309 | 0.00000 | 0.00031127 | 0.00044676 | 1 |
| SA | 35.000 | 32.675 | -2.3252 | -6.6435 | 0.0018851 | 0.00016166 | 1 |
| SB | 80.000 | 82.527 | 2.5266 | 3.1582 | 0.0042919 | 0.00015169 | 1 |
| SC | 800.00 | 775.27 | -24.731 | -3.0914 | 0.037696 | 0.00013867 | 1 |
| SD | 2,000.0 | 2,030.9 | 30.921 | 1.5461 | 0.098353 | 0.00042631 | 1 |
| SE | 10,000 | 10,195 | 195.20 | 1.9520 | 0.49247 | 0.0019449 | 1 |
| SF | 20,000 | 19,798 | -201.95 | -1.0098 | 0.95458 | 0.023132 | 1 |




| | |
|---|---|
| **Element Name:** | Ag |
| **Element Wavelength:** | Ag 328.068 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99970 |
| **A0 (Offset):** | -0.0000062066 |
| **A1 (Gain):** | 0.000068707 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.00038854 | -0.00038854 | 0.00000 | -0.0000062333 | 0.000014784 | 1 |
| SA | 10.000 | 10.496 | 0.49609 | 4.9609 | 0.00071549 | 0.000043370 | 1 |
| SB | 125.00 | 122.49 | -2.5052 | -2.0042 | 0.0084139 | 0.000037458 | 1 |
| SC | 250.00 | 248.23 | -1.7694 | -0.70775 | 0.017088 | 0.00013875 | 1 |
| SD | 500.00 | 496.05 | -3.9516 | -0.79031 | 0.034172 | 0.00031080 | 1 |
| SE | 1,000.00 | 1,040.8 | 40.844 | 4.0844 | 0.071990 | 0.00054399 | 1 |
| SF | 2,000.0 | 1,966.8 | -33.152 | -1.6576 | 0.13610 | 0.0012039 | 1 |

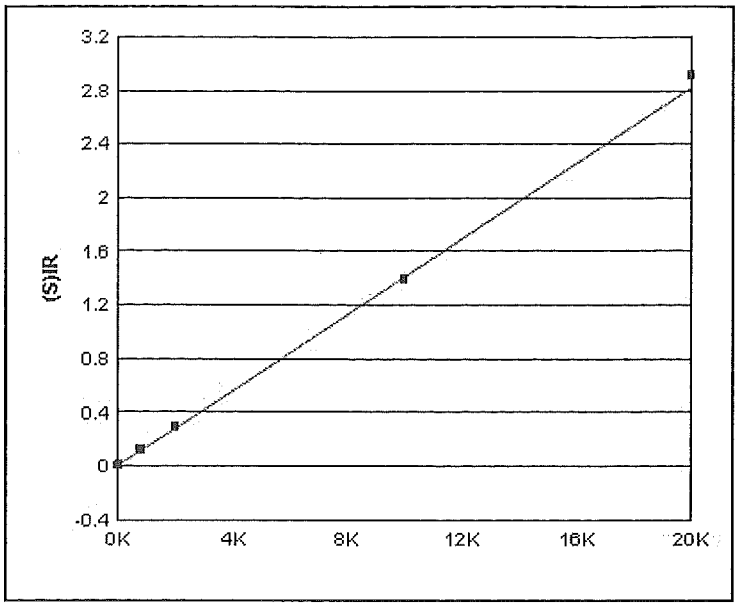



| | |
|---|---|
| **Element Name:** | Na |
| **Element Wavelength:** | Na 589.592 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:21:53 |
| **Date of Fit:** | 06/12/2015 11:21:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99957 |
| **A0 (Offset):** | -0.0051805 |
| **A1 (Gain):** | 0.000050966 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.41383 | -0.41383 | 0.00000 | -0.0052015 | 0.00082680 | 1 |
| SA | 5,000.0 | 5,142.3 | 142.31 | 2.8461 | 0.25690 | 0.0015421 | 1 |
| SB | 25,000 | 25,386 | 385.57 | 1.5423 | 1.2886 | 0.0022460 | 1 |
| SD | 125,000 | 128,700 | 3,697.2 | 2.9578 | 6.5540 | 0.028346 | 1 |
| SE | 250,000 | 258,880 | 8,876.7 | 3.5507 | 13.189 | 0.18412 | 1 |
| S500000 | 500,000 | 486,900 | -13,102 | -2.6204 | 24.810 | 0.15417 | 1 |

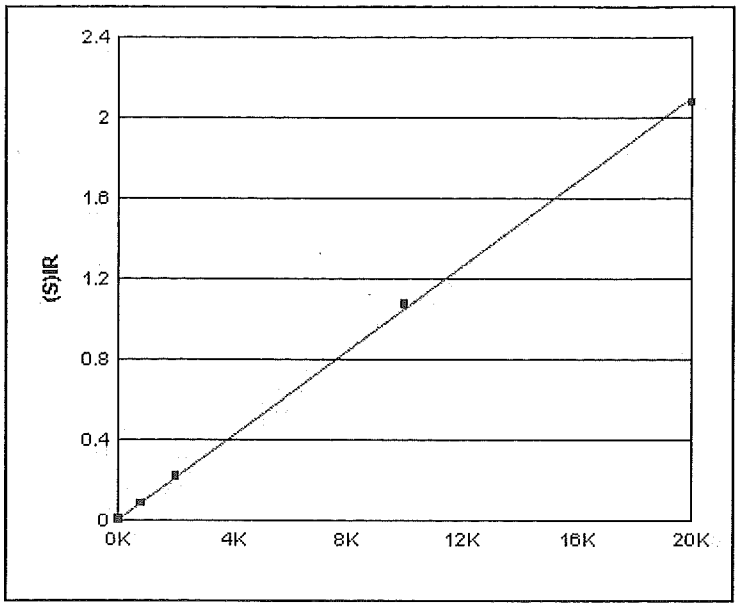



| | |
|---|---|
| **Element Name:** | Tl |
| **Element Wavelength:** | Tl 190.856 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99975 |
| **A0 (Offset):** | -0.00078587 |
| **A1 (Gain):** | 0.00014138 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| Reslope | | QC Normalize | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0047679 | -0.0047679 | 0.00000 | -0.00078654 | 0.00026102 | 1 |
| SA | 25.000 | 27.763 | 2.7633 | 11.053 | 0.0031827 | 0.00031682 | 1 |
| SB | 80.000 | 83.070 | 3.0697 | 3.8371 | 0.011153 | 0.00027196 | 1 |
| SC | 800.00 | 842.20 | 42.199 | 5.2748 | 0.12024 | 0.00054238 | 1 |
| SD | 2,000.0 | 2,017.9 | 17.932 | 0.89658 | 0.28933 | 0.0013401 | 1 |
| SE | 10,000 | 9,668.1 | -331.91 | -3.3191 | 1.3902 | 0.0066206 | 1 |
| SF | 20,000 | 20,266 | 265.85 | 1.3292 | 2.9137 | 0.060238 | 1 |

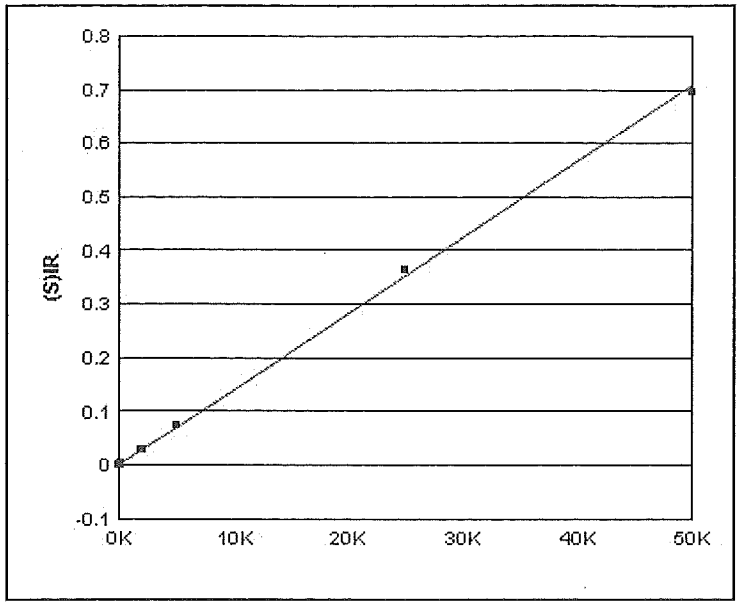



| | |
|---|---|
| **Element Name:** | Ti |
| **Element Wavelength:** | Ti 334.941 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99985 |
| **A0 (Offset):** | 0.00010684 |
| **A1 (Gain):** | 0.00010490 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| Reslope | | QC Normalize | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

Concentration

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0028857 | -0.0028857 | 0.00000 | 0.00010654 | 0.000047579 | 1 |
| SA | 25.000 | 25.709 | 0.70880 | 2.8352 | 0.0028123 | 0.000066620 | 1 |
| SB | 80.000 | 84.111 | 4.1110 | 5.1388 | 0.0089785 | 0.00020734 | 1 |
| SC | 800.00 | 803.75 | 3.7454 | 0.46817 | 0.084492 | 0.00011197 | 1 |
| SD | 2,000.0 | 2,044.9 | 44.852 | 2.2426 | 0.21500 | 0.0019014 | 1 |
| SE | 10,000 | 10,225 | 225.21 | 2.2521 | 1.0740 | 0.0046866 | 1 |
| SF | 20,000 | 19,721 | -278.79 | -1.3939 | 2.0707 | 0.017580 | 1 |

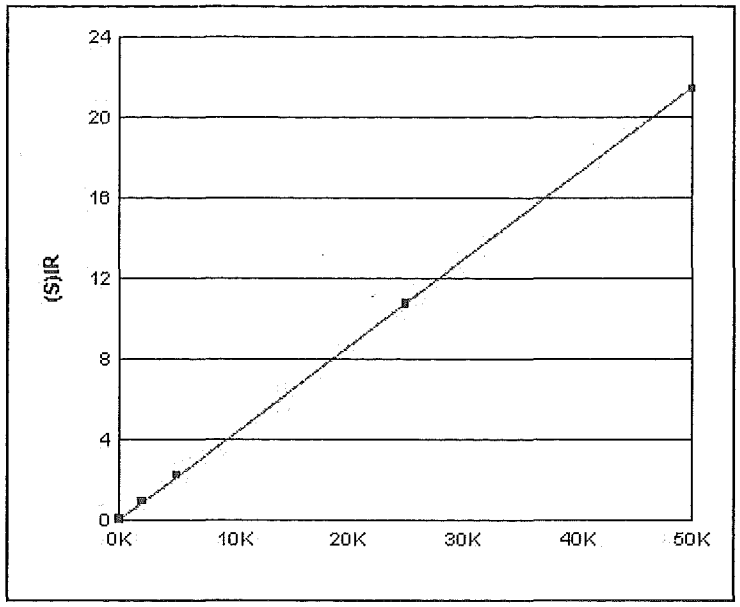



| | |
|---|---|
| **Element Name:** | V |
| **Element Wavelength:** | V 292.402 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99969 |
| **A0 (Offset):** | -0.000012085 |
| **A1 (Gain):** | 0.000014151 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.0080624 | -0.0080624 | 0.00000 | -0.000012199 | 0.0000083158 | 1 |
| SA | 50.000 | 53.437 | 3.4372 | 6.8745 | 0.00074434 | 0.0000078042 | 1 |
| SB | 200.00 | 205.25 | 5.2530 | 2.6265 | 0.0028929 | 0.000056288 | 1 |
| SC | 2,000.0 | 2,021.0 | 20.961 | 1.0481 | 0.028588 | 0.00015919 | 1 |
| SD | 5,000.0 | 5,234.9 | 234.86 | 4.6972 | 0.074092 | 0.00063882 | 1 |
| SE | 25,000 | 25,704 | 704.16 | 2.8166 | 0.36386 | 0.0025565 | 1 |
| SF | 50,000 | 49,031 | -969.07 | -1.9381 | 0.69379 | 0.0060783 | 1 |




| | |
|---|---|
| **Element Name:** | Zn |
| **Element Wavelength:** | Zn 206.200 nm |
| **Concentration Units:** | ug/L |
| **Date of Calibration:** | 06/12/2015 11:18:53 |
| **Date of Fit:** | 06/12/2015 11:18:53 |
| **Type of Fit:** | Linear |
| **Correlation:** | 0.99993 |
| **A0 (Offset):** | 0.00081773 |
| **A1 (Gain):** | 0.00043014 |
| **A2 (Curvature):** | 0.00000 |
| **n (Exponent):** | 1.0000 |

| **Reslope** | | **QC Normalize** | |
|---|---|---|---|
| **Slope:** | 1.0000 | **Slope factor:** | 1.0000 |
| **Y Int:** | 0.00000 | **Offset:** | 0.00000 |

**Concentration**

| Standard Name | Stated | Found | Diff | % Diff | (S)IR | Stddev | Emphasis |
|---|---|---|---|---|---|---|---|
| S0 | 0.00000 | -0.010464 | -0.010464 | 0.00000 | 0.00081323 | 0.000099917 | 1 |
| SA | 60.000 | 64.344 | 4.3440 | 7.2400 | 0.028495 | 0.00021674 | 1 |
| SB | 200.00 | 207.74 | 7.7437 | 3.8718 | 0.090172 | 0.00023106 | 1 |
| SC | 2,000.0 | 2,061.7 | 61.745 | 3.0872 | 0.88759 | 0.0050615 | 1 |
| SD | 5,000.0 | 5,193.2 | 193.18 | 3.8637 | 2.2346 | 0.0023107 | 1 |
| SE | 25,000 | 24,956 | -43.962 | -0.17585 | 10.735 | 0.060370 | 1 |
| SF | 50,000 | 49,777 | -223.07 | -0.44615 | 21.409 | 0.64721 | 1 |

Sample Name: S0 Acquired: 06/12/2015 10:59:17 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

K15113
Joanna C Sanchez
06/19/2015

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00094** | **.00008** | **.00015** | **.00321** | **-.00004** | **-.00034** | **.00278** |
| Stddev | .00010 | .00036 | .00036 | .00032 | .00016 | .00010 | .00024 |
| %RSD | 10.945 | 460.28 | 236.57 | 9.9146 | 359.49 | 27.926 | 8.5901 |
| #1 | .00083 | .00029 | .00053 | .00298 | .00014 | -.00043 | .00305 |
| #2 | .00094 | .00027 | .00013 | .00307 | -.00013 | -.00024 | .00269 |
| #3 | .00104 | -.00034 | -.00020 | .00357 | -.00014 | -.00036 | .00259 |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00034** | **.00006** | **.00050** | **-.00005** | **.00134** | **-.00010** | **.00006** |
| Stddev | .00021 | .00048 | .00004 | .00017 | .00054 | .00005 | .00006 |
| %RSD | 59.798 | 849.97 | 8.5614 | 370.22 | 40.596 | 47.714 | 102.98 |
| #1 | .00055 | -.00034 | .00054 | -.00003 | .00073 | -.00012 | -.00001 |
| #2 | .00014 | -.00008 | .00046 | -.00023 | .00154 | -.00012 | .00007 |
| #3 | .00034 | .00060 | .00051 | .00012 | .00176 | -.00004 | .00010 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.00018** | **-.00125** | **-.00080** | **.00031** | **-.00001** | **-.00520** | **-.00079** |
| Stddev | .00018 | .00034 | .00081 | .00045 | .00001 | .00083 | .00026 |
| %RSD | 99.397 | 27.369 | 101.52 | 143.53 | 237.18 | 15.895 | 33.186 |
| #1 | -.00006 | -.00127 | -.00167 | .00067 | -.00001 | -.00452 | -.00049 |
| #2 | -.00010 | -.00090 | -.00067 | -.00019 | -.00002 | -.00612 | -.00091 |
| #3 | -.00039 | -.00158 | -.00006 | .00045 | .00001 | -.00497 | -.00096 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **.00011** | **-.00001** | **.00081** |
| Stddev | .00005 | .00001 | .00010 |
| %RSD | 44.658 | 68.169 | 12.286 |
| #1 | .00005 | .00000 | .00087 |
| #2 | .00012 | -.00001 | .00070 |
| #3 | .00014 | -.00002 | .00087 |

Sample Name: S0 Acquired: 06/12/2015 10:59:17 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3434.1** | **32217.** | **466170.** | **4591.2** | **13671.** | **217110.** |
| Stddev | 6.1 | 243. | 2408. | 9.0 | 130. | 895. |
| %RSD | .17887 | .75400 | .51645 | .19520 | .94746 | .41234 |
| | | | | | | |
| #1 | 3427.0 | 32411. | 468930. | 4581.8 | 13762. | 216270. |
| #2 | 3437.7 | 32296. | 465080. | 4599.6 | 13727. | 218050. |
| #3 | 3437.5 | 31945. | 464500. | 4592.2 | 13522. | 217030. |

Sample Name: SA Acquired: 06/12/2015 11:02:13 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00139** | **.00588** | **.00087** | **.12885** | **.00254** | **.01242** | **.29217** | **.01051** |
| Stddev | .00006 | .00018 | .00003 | .00057 | .00010 | .00027 | .00118 | .00026 |
| %RSD | 4.0207 | 3.1007 | 3.2538 | .44003 | 3.8100 | 2.1968 | .40226 | 2.5084 |
| #1 | .00145 | .00603 | .00089 | .12894 | .00254 | .01253 | .29097 | .01075 |
| #2 | .00134 | .00593 | .00088 | .12936 | .00264 | .01262 | .29225 | .01054 |
| #3 | .00140 | .00568 | .00083 | .12824 | .00245 | .01210 | .29331 | .01023 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.03241** | **.00200** | **.00172** | **.00378** | **.01342** | **.00179** | **.00590** | **.04722** |
| Stddev | .00018 | .00001 | .00011 | .00042 | .00006 | .00013 | .00032 | .00042 |
| %RSD | .56450 | .69751 | 6.2633 | 11.017 | .46488 | 7.4001 | 5.3711 | .88235 |
| #1 | .03258 | .00199 | .00185 | .00345 | .01336 | .00178 | .00581 | .04769 |
| #2 | .03242 | .00201 | .00166 | .00364 | .01341 | .00193 | .00625 | .04688 |
| #3 | .03222 | .00201 | .00166 | .00424 | .01348 | .00167 | .00563 | .04709 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.09161** | **.00189** | **.00072** | **.25690** | **.00318** | **.00281** | **.00074** | **.02850** |
| Stddev | .00177 | .00016 | .00004 | .00154 | .00032 | .00007 | .00001 | .00022 |
| %RSD | 1.9348 | 8.5756 | 6.0615 | .60027 | 9.9542 | 2.3689 | 1.0485 | .76062 |
| #1 | .08957 | .00176 | .00068 | .25516 | .00329 | .00283 | .00074 | .02864 |
| #2 | .09257 | .00207 | .00070 | .25808 | .00283 | .00287 | .00075 | .02825 |
| #3 | .09269 | .00183 | .00076 | .25746 | .00343 | .00274 | .00075 | .02860 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3339.2** | **31912.** | **458710.** | **4531.3** | **13531.** | **211850.** |
| Stddev | 15.6 | 111. | 3984. | 12.7 | 50. | 1988. |
| %RSD | .46592 | .34765 | .86861 | .28053 | .37092 | .93846 |
| #1 | 3321.8 | 31923. | 461790. | 4516.8 | 13579. | 210400. |
| #2 | 3351.7 | 31796. | 454210. | 4537.1 | 13479. | 211030. |
| #3 | 3344.1 | 32017. | 460130. | 4540.2 | 13535. | 214120. |

Sample Name: SB Acquired: 06/12/2015 11:05:07 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00328** | **.01915** | **.00600** | **.45931** | **.03877** | **.19527** | **1.4059** | **.20132** |
| Stddev | .00009 | .00051 | .00034 | .00189 | .00020 | .00037 | .0005 | .00020 |
| %RSD | 2.8626 | 2.6642 | 5.6902 | .41069 | .51666 | .18979 | .03263 | .09968 |
| #1 | .00321 | .01882 | .00621 | .46129 | .03858 | .19554 | 1.4055 | .20150 |
| #2 | .00338 | .01889 | .00560 | .45911 | .03898 | .19485 | 1.4064 | .20135 |
| #3 | .00324 | .01974 | .00618 | .45753 | .03875 | .19542 | 1.4059 | .20110 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.12649** | **.01225** | **.01548** | **.04819** | **.06439** | **.02200** | **.04807** | **.23143** |
| Stddev | .00079 | .00011 | .00003 | .00044 | .00023 | .00017 | .00027 | .00110 |
| %RSD | .62772 | .89599 | .16757 | .91351 | .35960 | .75643 | .55872 | .47579 |
| #1 | .12714 | .01237 | .01547 | .04778 | .06436 | .02196 | .04802 | .23088 |
| #2 | .12560 | .01217 | .01550 | .04865 | .06464 | .02219 | .04783 | .23072 |
| #3 | .12671 | .01219 | .01545 | .04813 | .06418 | .02186 | .04836 | .23270 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.45323** | **.00429** | **.00841** | **1.2886** | **.01115** | **.00898** | **.00289** | **.09017** |
| Stddev | .00092 | .00015 | .00004 | .0022 | .00027 | .00021 | .00006 | .00023 |
| %RSD | .20378 | 3.5344 | .44519 | .17430 | 2.4383 | 2.3093 | 1.9457 | .25625 |
| #1 | .45338 | .00445 | .00844 | 1.2871 | .01092 | .00876 | .00283 | .09030 |
| #2 | .45224 | .00414 | .00837 | 1.2876 | .01145 | .00917 | .00292 | .08991 |
| #3 | .45407 | .00429 | .00843 | 1.2912 | .01109 | .00901 | .00293 | .09031 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3228.3** | **32389.** | **459070.** | **4476.7** | **13603.** | **208980.** |
| Stddev | 7.7 | 118. | 7211. | 5.2 | 42. | 2102. |
| %RSD | .23940 | .36474 | 1.5708 | .11719 | .30952 | 1.0056 |
| #1 | 3233.4 | 32422. | 467000. | 4479.9 | 13647. | 206880. |
| #2 | 3232.1 | 32258. | 457300. | 4479.5 | 13563. | 209000. |
| #3 | 3219.4 | 32487. | 452900. | 4470.6 | 13599. | 211080. |

Sample Name: SC Acquired: 06/12/2015 11:07:54 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Cr2055 | Co2286 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.01340** | **.18908** | **.05813** | **1.2128** | **.38969** | **1.9638** | **2.0379** | **1.2664** |
| Stddev | .00008 | .00053 | .00043 | .0023 | .00172 | .0093 | .0066 | .0048 |
| %RSD | .61383 | .27910 | .74690 | .18753 | .44157 | .47272 | .32436 | .38153 |
| #1 | .01330 | .18929 | .05771 | 1.2106 | .38953 | 1.9536 | 2.0325 | 1.2618 |
| #2 | .01345 | .18947 | .05858 | 1.2151 | .39148 | 1.9718 | 2.0453 | 1.2714 |
| #3 | .01344 | .18848 | .05811 | 1.2126 | .38805 | 1.9660 | 2.0360 | 1.2659 |

| Elem | Cu3273 | Fe2598 | Pb2203 | Mn2576 | Mo2020 | Ni2316 | Se1960 | Ag3280 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.12221** | **.07977** | **.47192** | **.22429** | **.47257** | **2.3114** | **.03770** | **.01709** |
| Stddev | .00088 | .00047 | .00279 | .00026 | .00248 | .0079 | .00014 | .00014 |
| %RSD | .72107 | .59528 | .59136 | .11443 | .52463 | .34332 | .36788 | .81202 |
| #1 | .12216 | .07979 | .46935 | .22418 | .47065 | 2.3050 | .03773 | .01707 |
| #2 | .12312 | .08024 | .47489 | .22458 | .47537 | 2.3203 | .03781 | .01723 |
| #3 | .12136 | .07929 | .47152 | .22411 | .47168 | 2.3089 | .03754 | .01696 |

| Elem | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.12024** | **.08449** | **.02859** | **.88759** |
| Stddev | .00054 | .00011 | .00016 | .00506 |
| %RSD | .45107 | .13253 | .55685 | .57025 |
| #1 | .11974 | .08445 | .02846 | .88205 |
| #2 | .12082 | .08441 | .02877 | .89197 |
| #3 | .12017 | .08462 | .02854 | .88874 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3467.3** | **33273.** | **482730.** | **4663.6** | **13863.** | **218840.** |
| Stddev | 4.1 | 159. | 3505. | 7.0 | 73. | 1114. |
| %RSD | .11846 | .47637 | .72603 | .14996 | .52918 | .50885 |
| #1 | 3472.0 | 33128. | 486770. | 4671.3 | 13788. | 219830. |
| #2 | 3465.2 | 33442. | 480680. | 4661.7 | 13934. | 217630. |
| #3 | 3464.7 | 33250. | 480720. | 4657.7 | 13866. | 219060. |

Sample Name: SD Acquired: 06/12/2015 11:10:33 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.11964** | **.48655** | **.15608** | **2.9523** | **.97787** | **4.8825** | **6.9836** | **5.0667** |
| Stddev | .00081 | .00047 | .00054 | .0220 | .00526 | .0038 | .0323 | .0074 |
| %RSD | .67978 | .09668 | .34820 | .74537 | .53799 | .07784 | .46233 | .14612 |
| #1 | .12045 | .48658 | .15643 | 2.9669 | .98114 | 4.8805 | 6.9952 | 5.0690 |
| #2 | .11965 | .48701 | .15635 | 2.9630 | .98067 | 4.8869 | 7.0086 | 5.0726 |
| #3 | .11882 | .48607 | .15545 | 2.9270 | .97180 | 4.8802 | 6.9472 | 5.0584 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3.3263** | **.30062** | **.77763** | **1.2029** | **.31732** | **.53517** | **1.2159** | **6.0661** |
| Stddev | .0117 | .00164 | .00264 | .0040 | .00178 | .00363 | .0015 | .0269 |
| %RSD | .35094 | .54443 | .33946 | .33588 | .55947 | .67829 | .11982 | .44360 |
| #1 | 3.3307 | .29903 | .77834 | 1.2039 | .31830 | .53803 | 1.2161 | 6.0794 |
| #2 | 3.3352 | .30230 | .77985 | 1.2064 | .31839 | .53641 | 1.2173 | 6.0837 |
| #3 | 3.3131 | .30053 | .77471 | 1.1985 | .31527 | .53109 | 1.2144 | 6.0351 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2.3510** | **.09835** | **.03417** | **6.5540** | **.28933** | **.21500** | **.07409** | **2.2346** |
| Stddev | .0071 | .00043 | .00031 | .0284 | .00134 | .00190 | .00064 | .0023 |
| %RSD | .30137 | .43345 | .90950 | .43249 | .46319 | .88437 | .86219 | .10340 |
| #1 | 2.3526 | .09798 | .03383 | 6.5707 | .28990 | .21649 | .07481 | 2.2329 |
| #2 | 2.3571 | .09882 | .03443 | 6.5700 | .29029 | .21564 | .07358 | 2.2337 |
| #3 | 2.3432 | .09826 | .03426 | 6.5213 | .28780 | .21286 | .07389 | 2.2373 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2863.3** | **32605.** | **434600.** | **4232.9** | **13428.** | **196680.** |
| Stddev | 10.7 | 224. | 3810. | 5.7 | 55. | 1321. |
| %RSD | .37278 | .68566 | .87673 | .13583 | .40650 | .67147 |
| #1 | 2856.6 | 32367. | 430250. | 4228.8 | 13370. | 197860. |
| #2 | 2857.8 | 32637. | 437320. | 4230.4 | 13438. | 195250. |
| #3 | 2875.6 | 32810. | 436240. | 4239.4 | 13477. | 196940. |

Sample Name: SE Acquired: 06/12/2015 11:13:08 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.60296** | **2.4424** | **.78727** | **14.661** | **4.8974** | **23.569** | **13.988** | **24.663** |
| Stddev | .00256 | .0108 | .00428 | .139 | .0245 | .119 | .091 | .123 |
| %RSD | .42402 | .44203 | .54336 | .95001 | .50013 | .50295 | .65148 | .49789 |
| #1 | .60079 | 2.4527 | .79166 | 14.578 | 4.8965 | 23.683 | 14.027 | 24.787 |
| #2 | .60232 | 2.4435 | .78704 | 14.822 | 4.8734 | 23.580 | 13.883 | 24.661 |
| #3 | .60578 | 2.4312 | .78311 | 14.583 | 4.9224 | 23.446 | 14.053 | 24.541 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **16.497** | **1.5168** | **3.8543** | **5.9086** | **.64250** | **2.6616** | **5.9439** | **29.985** |
| Stddev | .068 | .0092 | .0315 | .0277 | .00401 | .0133 | .0272 | .122 |
| %RSD | .41492 | .60951 | .81841 | .46942 | .62434 | .50052 | .45682 | .40522 |
| #1 | 16.550 | 1.5264 | 3.8723 | 5.9317 | .64254 | 2.6572 | 5.9704 | 30.085 |
| #2 | 16.522 | 1.5079 | 3.8179 | 5.9164 | .63846 | 2.6510 | 5.9452 | 30.021 |
| #3 | 16.420 | 1.5163 | 3.8728 | 5.8779 | .64649 | 2.6765 | 5.9162 | 29.850 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **4.8370** | **.49247** | **.07199** | **13.189** | **1.3902** | **1.0740** | **.36386** | **10.735** |
| Stddev | .0442 | .00194 | .00054 | .184 | .0066 | .0047 | .00256 | .060 |
| %RSD | .91456 | .39493 | .75565 | 1.3961 | .47624 | .43636 | .70260 | .56234 |
| #1 | 4.8591 | .49469 | .07237 | 13.383 | 1.3948 | 1.0727 | .36636 | 10.798 |
| #2 | 4.7860 | .49171 | .07224 | 13.167 | 1.3932 | 1.0702 | .36397 | 10.730 |
| #3 | 4.8658 | .49103 | .07137 | 13.016 | 1.3826 | 1.0793 | .36125 | 10.678 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2664.9** | **31901.** | **417330.** | **4023.3** | **13163.** | **187750.** |
| Stddev | 8.0 | 61. | 2181. | 15.6 | 86. | 830. |
| %RSD | .29958 | .19193 | .52252 | .38758 | .65039 | .44206 |
| #1 | 2657.1 | 31889. | 415720. | 4006.7 | 13088. | 187670. |
| #2 | 2664.7 | 31968. | 416470. | 4025.7 | 13256. | 186960. |
| #3 | 2673.0 | 31847. | 419820. | 4037.6 | 13144. | 188610. |

Sample Name: SF Acquired: 06/12/2015 11:15:57 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Cr2055 | Co2286 | Cu3273 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **4.8059** | **1.5009** | **28.381** | **9.3358** | **47.216** | **49.356** | **31.151** | **3.0229** |
| Stddev | .1165 | .0380 | .250 | .0319 | 1.315 | 1.572 | .838 | .0363 |
| %RSD | 2.4233 | 2.5309 | .88139 | .34200 | 2.7850 | 3.1855 | 2.6898 | 1.2009 |
| #1 | 4.8864 | 1.5263 | 28.443 | 9.3684 | 48.064 | 50.425 | 31.700 | 2.9852 |
| #2 | 4.8590 | 1.5193 | 28.595 | 9.3046 | 47.883 | 50.092 | 31.567 | 3.0261 |
| #3 | 4.6724 | 1.4573 | 28.106 | 9.3344 | 45.701 | 47.551 | 30.187 | 3.0576 |

| Elem | Pb2203 | Mn2576 | Mo2020 | Ni2316 | Se1960 | Ag3280 | Tl1908 | Ti3349 |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **11.708** | **5.3082** | **11.890** | **56.942** | **.95458** | **.13610** | **2.9137** | **2.0707** |
| Stddev | .281 | .0425 | .354 | 1.516 | .02313 | .00120 | .0602 | .0176 |
| %RSD | 2.4020 | .79989 | 2.9787 | 2.6617 | 2.4233 | .88458 | 2.0674 | .84899 |
| #1 | 11.887 | 5.3495 | 12.136 | 57.915 | .97141 | .13471 | 2.9535 | 2.0889 |
| #2 | 11.853 | 5.3104 | 12.049 | 57.716 | .96413 | .13667 | 2.9431 | 2.0692 |
| #3 | 11.384 | 5.2647 | 11.484 | 55.196 | .92820 | .13691 | 2.8444 | 2.0538 |

| Elem | V_2924 | Zn2062 |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | **.69379** | **21.409** |
| Stddev | .00608 | .647 |
| %RSD | .87610 | 3.0230 |
| #1 | .68703 | 21.824 |
| #2 | .69552 | 21.740 |
| #3 | .69882 | 20.664 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710-2 |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3274.7** | **33210.** | **472760.** | **4399.1** | **209610.** |
| Stddev | 38.4 | 95. | 2979. | 59.9 | 826. |
| %RSD | 1.1734 | .28567 | .63002 | 1.3608 | .39396 |
| #1 | 3253.3 | 33138. | 475720. | 4361.9 | 210530. |
| #2 | 3251.7 | 33175. | 469760. | 4367.4 | 209370. |
| #3 | 3319.0 | 33317. | 472800. | 4468.2 | 208930. |

Sample Name: S500000 Acquired: 06/12/2015 11:19:07 Type: Cal
Method: ICP08 ISM01.3 2015(v8) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Ca3179 | Fe2598 | Mg2790 | K_7664 | Na5895 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **1.1333** | **26.188** | **7.3587** | **1.2431** | **9.4769** | **24.810** |
| Stddev | .0031 | .272 | .0215 | .0032 | .0136 | .154 |
| %RSD | .26966 | 1.0374 | .29256 | .25539 | .14358 | .62141 |
| #1 | 1.1297 | 26.448 | 7.3535 | 1.2396 | 9.4710 | 24.674 |
| #2 | 1.1352 | 26.211 | 7.3823 | 1.2459 | 9.4924 | 24.978 |
| #3 | 1.1348 | 25.906 | 7.3402 | 1.2437 | 9.4672 | 24.779 |

| Int. Std. | Sc3613 | Y_3710 |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | **31792.** | **12996.** |
| Stddev | 110. | 36. |
| %RSD | .34680 | .27530 |
| #1 | 31919. | 13028. |
| #2 | 31729. | 12957. |
| #3 | 31728. | 13004. |

Sample Name: ICV1 Acquired: 06/12/2015 11:22:07 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 | Co2286 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2571.9** | **965.91** | **990.30** | **525.15** | **510.82** | **513.63** | **10908.** | **514.77** | **512.67** |
| Stddev | 66.8 | 4.71 | 3.71 | 3.20 | 2.26 | 2.01 | 42. | 2.03 | 1.38 |
| %RSD | 2.5954 | .48812 | .37514 | .61007 | .44195 | .39134 | .38777 | .39415 | .26884 |
| #1 | 2515.2 | 969.95 | 994.22 | 522.53 | 510.64 | 514.69 | 10891. | 516.32 | 513.62 |
| #2 | 2645.4 | 967.05 | 986.83 | 528.72 | 513.16 | 514.88 | 10956. | 515.52 | 513.29 |
| #3 | 2555.0 | 960.73 | 989.85 | 524.20 | 508.66 | 511.31 | 10878. | 512.47 | 511.09 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **498.67** | **5495.0** | **1025.5** | **6282.9** | **520.13** | **1.0087** | **518.28** | **10010.** | **947.71** |
| Stddev | 4.10 | 28.2 | 3.5 | 9.0 | 2.23 | .4132 | 1.04 | 76. | 5.10 |
| %RSD | .82151 | .51362 | .34605 | .14364 | .42897 | 40.958 | .20021 | .75540 | .53864 |
| #1 | 501.39 | 5507.5 | 1028.6 | 6273.7 | 517.92 | 1.4528 | 519.27 | 10064. | 946.82 |
| #2 | 500.67 | 5514.8 | 1026.3 | 6283.4 | 522.39 | .93783 | 518.38 | 10042. | 953.20 |
| #3 | 493.96 | 5462.7 | 1021.6 | 6291.7 | 520.09 | .63562 | 517.20 | 9923.2 | 943.10 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **483.32** | **10468.** | **1081.9** | **7.3565** | **506.36** | **1034.8** |
| Stddev | 2.58 | 49. | 4.0 | 1.6751 | 6.63 | 1.3 |
| %RSD | .53424 | .46560 | .37344 | 22.770 | 1.3084 | .12162 |
| #1 | 485.70 | 10451. | 1081.2 | 5.4305 | 499.50 | 1035.1 |
| #2 | 483.67 | 10522. | 1086.2 | 8.4740 | 512.72 | 1035.9 |
| #3 | 480.57 | 10429. | 1078.2 | 8.1651 | 506.87 | 1033.4 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

Sample Name: ICV1 Acquired: 06/12/2015 11:22:07 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3245.6** | **33113.** | **482530.** | **4548.6** | **13534.** | **214240.** |
| Stddev | 15.2 | 230. | 5344. | 22.5 | 76. | 1271. |
| %RSD | .46745 | .69343 | 1.1076 | .49559 | .56435 | .59331 |
| | | | | | | |
| #1 | 3234.0 | 33299. | 488520. | 4531.3 | 13567. | 212860. |
| #2 | 3240.1 | 32856. | 478250. | 4540.5 | 13447. | 214520. |
| #3 | 3262.8 | 33183. | 480830. | 4574.1 | 13588. | 215360. |

Sample Name: ICB1 Acquired: 06/12/2015 11:24:49 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **-38.934** | **4.7087** | **1.9135** | **-.17954** | **-.10333** | **.04348** | **4.4403** | **-.05272** |
| Stddev | 18.172 | 2.2855 | 4.1435 | .06488 | .08007 | .02795 | 6.8182 | .11117 |
| %RSD | 46.674 | 48.538 | 216.54 | 36.136 | 77.491 | 64.274 | 153.55 | 210.86 |
| #1 | -48.359 | 5.6364 | .28269 | -.24745 | -.08101 | .03336 | 11.784 | -.00183 |
| #2 | -17.986 | 2.1052 | -1.1665 | -.17298 | -.03679 | .07508 | -1.6897 | -.18023 |
| #3 | -50.458 | 6.3845 | 6.6242 | -.11819 | -.19220 | .02201 | 3.2268 | .02389 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **-.33370** | **-.73055** | **10.545** | **-.44356** | **25.392** | **.19318** | **.19244** | **.40752** |
| Stddev | .24774 | .59184 | 4.849 | 1.8662 | 30.724 | .13709 | .09751 | .09139 |
| %RSD | 74.240 | 81.012 | 45.982 | 420.72 | 121.00 | 70.966 | 50.672 | 22.426 |
| #1 | -.45591 | -.75449 | 5.3144 | 1.1590 | 59.959 | .12063 | .27005 | .42085 |
| #2 | -.04860 | -.12711 | 14.890 | .00266 | 15.025 | .35129 | .22428 | .49152 |
| #3 | -.49659 | -1.3101 | 11.431 | -2.4924 | 1.1921 | .10760 | .08299 | .31020 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **48.337** | **3.1308** | **-.05853** | **56.069** | **2.7458** | **.93709** | **.21330** | **.64759** |
| Stddev | 15.982 | 6.6943 | .29399 | 8.311 | .9377 | 1.2424 | .15898 | .41245 |
| %RSD | 33.065 | 213.82 | 502.30 | 14.823 | 34.149 | 132.58 | 74.531 | 63.691 |
| #1 | 36.649 | 10.860 | -.05030 | 49.352 | 3.1151 | 1.9622 | .13859 | 1.0658 |
| #2 | 41.812 | -.64338 | .23126 | 65.364 | 3.4426 | 1.2937 | .10545 | .63576 |
| #3 | 66.549 | -.82428 | -.35655 | 53.493 | 1.6797 | -.44463 | .39588 | .24117 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: ICB1 Acquired: 06/12/2015 11:24:49 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3537.6** | **33613.** | **493290.** | **4737.5** | **14081.** | **224970.** |
| Stddev | 10.7 | 110. | 3550. | 15.9 | 54. | 1737. |
| %RSD | .30315 | .32837 | .71974 | .33540 | .38081 | .77217 |
| | | | | | | |
| #1 | 3525.3 | 33531. | 492990. | 4719.2 | 14021. | 224360. |
| #2 | 3543.4 | 33571. | 489900. | 4746.6 | 14097. | 223620. |
| #3 | 3544.2 | 33739. | 496990. | 4746.8 | 14125. | 226930. |

Sample Name: ICSA1 Acquired: 06/12/2015 11:27:45 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **259120.** | **8.2844** | **4.1268** | **6.2436** | **-.45202** | **-.25469** | **261550.** |
| Stddev | 2602. | 1.7834 | 5.5001 | .4089 | .18825 | .17355 | 2435. |
| %RSD | 1.0043 | 21.528 | 133.28 | 6.5494 | 41.647 | 68.143 | .93079 |
| #1 | 256820. | 9.0904 | -.75301 | 6.1587 | -.24035 | -.11454 | 259010. |
| #2 | 258590. | 6.2402 | 3.0466 | 6.6883 | -.51503 | -.20071 | 261780. |
| #3 | 261950. | 9.5225 | 10.087 | 5.8837 | -.60069 | -.44882 | 263860. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **58.497** | **-2.2199** | **2.9001** | **105560.** | F **13.684** | **266930.** | **16.521** |
| Stddev | .271 | .5944 | 1.3843 | 1154. | 3.727 | 1566. | .815 |
| %RSD | .46249 | 26.775 | 47.734 | 1.0929 | 27.239 | .58681 | 4.9314 |
| #1 | 58.699 | -1.5538 | 2.8262 | 104350. | 15.006 | 265290. | 15.873 |
| #2 | 58.189 | -2.6962 | 1.5541 | 105660. | 16.570 | 267070. | 17.436 |
| #3 | 58.602 | -2.4097 | 4.3198 | 106650. | 9.4759 | 268420. | 16.255 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass |
| High Limit | | | | | 10.000 | | |
| Low Limit | | | | | -10.000 | | |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **.18511** | **-3.8367** | **46.344** | **-4.2680** | **.30143** | **70.895** | **-3.8250** |
| Stddev | .19869 | .4578 | 34.639 | .3009 | .24486 | 10.719 | 5.5801 |
| %RSD | 107.34 | 11.932 | 74.744 | 7.0510 | 81.234 | 15.120 | 145.89 |
| #1 | .35638 | -3.8012 | 69.130 | -4.0669 | .31397 | 77.020 | 1.9066 |
| #2 | -.03273 | -3.3977 | 63.419 | -4.1232 | .05054 | 58.518 | -4.1414 |
| #3 | .23168 | -4.3113 | 6.4821 | -4.6140 | .53978 | 77.148 | -9.2402 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: ICSA1 Acquired: 06/12/2015 11:27:45 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | F **25.191** | **-.99639** | **3.2130** |
| Stddev | .647 | .48804 | .7692 |
| %RSD | 2.5698 | 48.981 | 23.939 |
| | | | |
| #1 | 24.445 | -.86058 | 2.7171 |
| #2 | 25.527 | -.59064 | 4.0991 |
| #3 | 25.601 | -1.5380 | 2.8228 |
| | | | |
| Check ? | Chk Fail | Chk Pass | Chk Pass |
| High Limit | 25.000 | | |
| Low Limit | -25.000 | | |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2782.9** | **32027.** | **436530.** | **4231.3** | **13111.** | **193680.** |
| Stddev | 2.4 | 125. | 5972. | 10.4 | 81. | 1791. |
| %RSD | .08708 | .38976 | 1.3679 | .24674 | .62105 | .92460 |
| | | | | | | |
| #1 | 2785.3 | 32166. | 429940. | 4242.6 | 13205. | 195730. |
| #2 | 2783.1 | 31991. | 438080. | 4229.6 | 13066. | 192900. |
| #3 | 2780.4 | 31924. | 441570. | 4221.9 | 13062. | 192410. |

Sample Name: ICSAB1 Acquired: 06/12/2015 11:30:37 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **252600.** | **610.04** | **107.02** | **528.88** | **522.78** | **1023.1** | **257630.** |
| Stddev | 1297. | 2.20 | 4.22 | 3.08 | 2.16 | 1.7 | 1268. |
| %RSD | .51334 | .36112 | 3.9452 | .58153 | .41280 | .16193 | .49199 |
| #1 | 251260. | 607.50 | 103.13 | 525.49 | 520.30 | 1025.0 | 256210. |
| #2 | 253850. | 611.20 | 111.51 | 531.48 | 523.79 | 1022.1 | 258650. |
| #3 | 252700. | 611.42 | 106.43 | 529.66 | 524.25 | 1022.2 | 258040. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **573.99** | **531.41** | **524.03** | **103940.** | **66.225** | **261260.** | **526.31** |
| Stddev | 1.19 | .89 | 1.03 | 583. | 2.666 | 1113. | 4.61 |
| %RSD | .20671 | .16661 | .19649 | .56093 | 4.0255 | .42616 | .87666 |
| #1 | 575.24 | 532.08 | 522.91 | 103280. | 67.937 | 260150. | 521.00 |
| #2 | 572.88 | 531.73 | 524.94 | 104410. | 63.153 | 262370. | 529.34 |
| #3 | 573.83 | 530.40 | 524.22 | 104120. | 67.584 | 261260. | 528.59 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **.54991** | **1064.1** | **72.564** | **41.110** | **207.87** | **105.57** | **97.769** |
| Stddev | .46862 | 4.5 | 39.054 | 6.628 | .55 | 8.14 | 2.406 |
| %RSD | 85.218 | .42133 | 53.820 | 16.123 | .26546 | 7.7113 | 2.4605 |
| #1 | 1.0881 | 1069.2 | 85.502 | 47.929 | 207.43 | 97.677 | 98.784 |
| #2 | .32958 | 1062.3 | 103.51 | 34.691 | 207.69 | 113.94 | 95.022 |
| #3 | .23206 | 1060.9 | 28.683 | 40.710 | 208.49 | 105.09 | 99.501 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | |
| Low Limit | | | | | | | |

Sample Name: ICSAB1 Acquired: 06/12/2015 11:30:37 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | F **26.600** | **516.53** | **1023.6** |
| Stddev | 1.668 | 7.41 | 3.7 |
| %RSD | 6.2706 | 1.4342 | .35743 |
| | | | |
| #1 | 24.677 | 524.22 | 1020.7 |
| #2 | 27.657 | 509.45 | 1022.4 |
| #3 | 27.465 | 515.92 | 1027.7 |
| | | | |
| Check ? | Chk Fail | Chk Pass | Chk Pass |
| High Limit | 25.000 | | |
| Low Limit | -25.000 | | |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2766.5** | **32452.** | **435030.** | **4213.8** | **13204.** | **193550.** |
| Stddev | 6.8 | 164. | 4255. | 6.1 | 58. | 1354. |
| %RSD | .24650 | .50458 | .97807 | .14372 | .44251 | .69929 |
| | | | | | | |
| #1 | 2758.7 | 32430. | 430390. | 4217.4 | 13209. | 195110. |
| #2 | 2771.6 | 32301. | 438750. | 4217.3 | 13143. | 192840. |
| #3 | 2769.2 | 32626. | 435950. | 4206.8 | 13260. | 192700. |

Sample Name: CCV1 Acquired: 06/12/2015 11:33:18 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **232650.** | **24160.** | **9857.2** | **23341.** | **9498.9** | **9429.9** | **240030.** |
| Stddev | 1806. | 138. | 61.5 | 117. | 53.3 | 48.5 | 589. |
| %RSD | .77626 | .56960 | .62391 | .49969 | .56151 | .51421 | .24522 |
| #1 | 234740. | 24277. | 9916.7 | 23472. | 9559.6 | 9465.3 | 240710. |
| #2 | 231580. | 24196. | 9861.0 | 23306. | 9459.6 | 9449.7 | 239620. |
| #3 | 231650. | 24009. | 9793.9 | 23246. | 9477.4 | 9374.6 | 239770. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **23513.** | **24605.** | **23583.** | **242610.** | **23913.** | **236710.** | **22798.** |
| Stddev | 129. | 113. | 157. | 382. | 151. | 1158. | 140. |
| %RSD | .54935 | .45934 | .66448 | .15735 | .63136 | .48906 | .61501 |
| #1 | 23604. | 24717. | 23576. | 243040. | 24069. | 238050. | 22960. |
| #2 | 23569. | 24605. | 23743. | 242460. | 23903. | 236110. | 22705. |
| #3 | 23365. | 24491. | 23430. | 242320. | 23768. | 235980. | 22730. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **9430.6** | **24568.** | **242330.** | **9609.4** | **981.99** | **243400.** | **9246.5** |
| Stddev | 48.9 | 121. | 770. | 48.5 | 5.91 | 1036. | 30.3 |
| %RSD | .51804 | .49338 | .31760 | .50455 | .60186 | .42555 | .32800 |
| #1 | 9463.5 | 24689. | 242520. | 9637.9 | 980.60 | 244580. | 9273.6 |
| #2 | 9453.8 | 24569. | 241490. | 9636.9 | 988.48 | 242970. | 9252.2 |
| #3 | 9374.5 | 24447. | 243000. | 9553.4 | 976.91 | 242640. | 9213.7 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: CCV1 Acquired: 06/12/2015 11:33:18 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **9489.6** | **23785.** | **23500.** |
| Stddev | 55.1 | 141. | 117. |
| %RSD | .58105 | .59076 | .49866 |
| | | | |
| #1 | 9552.1 | 23699. | 23569. |
| #2 | 9447.6 | 23709. | 23566. |
| #3 | 9469.3 | 23947. | 23364. |
| | | | |
| Check ? | Chk Pass | Chk Pass | Chk Pass |
| Value | | | |
| Range | | | |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2729.2** | **32648.** | **434120.** | **4135.6** | **13252.** | **191910.** |
| Stddev | 11.1 | 76. | 3125. | 18.8 | 64. | 599. |
| %RSD | .40732 | .23160 | .71986 | .45438 | .48592 | .31198 |
| | | | | | | |
| #1 | 2718.9 | 32720. | 434600. | 4124.9 | 13326. | 191550. |
| #2 | 2727.7 | 32655. | 436980. | 4124.6 | 13223. | 191580. |
| #3 | 2741.0 | 32569. | 430780. | 4157.3 | 13208. | 192600. |

Sample Name: CCB1 Acquired: 06/12/2015 11:36:07 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **23.380** | **5.3464** | **-.31621** | **2.9042** | **1.5625** | **.59063** | **30.737** | **.94343** |
| Stddev | 2.813 | 2.0966 | 4.5380 | .0976 | .0816 | .19385 | 5.504 | .46310 |
| %RSD | 12.032 | 39.215 | 1435.1 | 3.3593 | 5.2209 | 32.821 | 17.907 | 49.086 |
| #1 | 26.300 | 5.1625 | 4.4724 | 2.9089 | 1.4747 | .75871 | 32.587 | 1.4045 |
| #2 | 20.687 | 7.5290 | -.86791 | 2.9993 | 1.5770 | .63462 | 35.077 | .94745 |
| #3 | 23.154 | 3.3478 | -4.5532 | 2.8044 | 1.6359 | .37857 | 24.546 | .47834 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **1.4275** | **1.4013** | **46.506** | **.89003** | **27.979** | **3.0557** | **2.0826** | **1.9094** |
| Stddev | .3790 | 1.0497 | 16.070 | 1.8992 | 34.802 | 1.3158 | .6237 | .4600 |
| %RSD | 26.548 | 74.911 | 34.555 | 213.39 | 124.39 | 43.060 | 29.949 | 24.091 |
| #1 | 1.8576 | 2.0453 | 58.354 | 3.0505 | 67.621 | 1.7916 | 2.7630 | 2.3984 |
| #2 | 1.2825 | .18998 | 52.950 | -.51630 | 13.866 | 4.4177 | 1.9468 | 1.8445 |
| #3 | 1.1425 | 1.9685 | 28.214 | .13590 | 2.4502 | 2.9577 | 1.5380 | 1.4853 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **109.56** | **.09863** | **.46901** | **69.269** | **3.8607** | **1.4657** | **1.7039** | **3.7413** |
| Stddev | 81.32 | 1.3940 | .43680 | 8.689 | 1.7417 | .8537 | .6112 | 1.1335 |
| %RSD | 74.230 | 1413.3 | 93.133 | 12.543 | 45.112 | 58.244 | 35.873 | 30.296 |
| #1 | 194.80 | -1.3962 | .68600 | 78.264 | 5.5043 | .52060 | 1.9424 | 4.6557 |
| #2 | 101.05 | 1.3632 | -.03380 | 60.923 | 2.0352 | 2.1808 | 2.1600 | 4.0950 |
| #3 | 32.824 | .32892 | .75482 | 68.621 | 4.0427 | 1.6955 | 1.0094 | 2.4731 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB1 Acquired: 06/12/2015 11:36:07 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3395.7** | **32710.** | **481960.** | **4572.6** | **13419.** | **213540.** |
| Stddev | 68.0 | 173. | 1190. | 91.1 | 95. | 2902. |
| %RSD | 2.0039 | .52998 | .24691 | 1.9924 | .70938 | 1.3591 |
| | | | | | | |
| #1 | 3343.1 | 32900. | 483330. | 4505.8 | 13511. | 212260. |
| #2 | 3371.4 | 32668. | 481330. | 4535.6 | 13424. | 216860. |
| #3 | 3472.6 | 32561. | 481210. | 4676.4 | 13321. | 211500. |

Sample Name: PBS1 Acquired: 06/12/2015 11:39:04 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **-5.0667** | **-.10712** | **.08430** | **.67523** | **.24394** | **.03409** | **107.08** | **.18899** |
| Stddev | 25.209 | 1.6702 | 1.8026 | .15857 | .24543 | .04584 | 4.81 | .17992 |
| %RSD | 497.55 | 1559.1 | 2138.4 | 23.484 | 100.61 | 134.47 | 4.4891 | 95.202 |
| #1 | -3.7100 | .36383 | 1.1603 | .74571 | .42692 | .02516 | 111.62 | .04955 |
| #2 | -30.927 | -1.9623 | 1.0894 | .49364 | .33986 | -.00663 | 107.58 | .39209 |
| #3 | 19.437 | 1.2771 | -1.9968 | .78634 | -.03496 | .08373 | 102.04 | .12533 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **.42200** | **-.20335** | **20.682** | **-.68432** | **2.6678** | **.58338** | **.57300** | **.65642** |
| Stddev | .13979 | 1.0185 | 3.696 | .68301 | 5.9692 | .87485 | .19293 | .13730 |
| %RSD | 33.127 | 500.85 | 17.873 | 99.808 | 223.75 | 149.96 | 33.671 | 20.917 |
| #1 | .54971 | .11619 | 23.982 | .10353 | -1.9695 | .97110 | .79577 | .80106 |
| #2 | .44364 | -1.3433 | 21.377 | -1.1093 | 9.4027 | 1.1974 | .46004 | .52787 |
| #3 | .27264 | .61704 | 16.687 | -1.0472 | .57024 | -.41833 | .46318 | .64033 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **24.599** | **-.70118** | **-.10609** | **59.533** | **.72544** | **1.7451** | **.11903** | **2.2004** |
| Stddev | 28.872 | 3.1594 | .24812 | 22.461 | 1.8927 | 1.3462 | .41510 | .3361 |
| %RSD | 117.37 | 450.58 | 233.86 | 37.728 | 260.90 | 77.141 | 348.75 | 15.276 |
| #1 | 48.970 | 2.8914 | -.36928 | 34.246 | 1.5664 | 2.6777 | -.06862 | 2.3575 |
| #2 | -7.2871 | -3.0470 | .12353 | 67.185 | 2.0520 | 2.3557 | .59482 | 2.4292 |
| #3 | 32.113 | -1.9479 | -.07253 | 77.168 | -1.4420 | .20181 | -.16912 | 1.8145 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3481.0** | **32962.** | **477990.** | **4676.0** | **13678.** | **217470.** |
| Stddev | 41.9 | 87. | 6685. | 59.2 | 65. | 108. |
| %RSD | 1.2022 | .26488 | 1.3985 | 1.2658 | .47428 | .04973 |
| #1 | 3439.2 | 32864. | 484880. | 4617.9 | 13605. | 217570. |
| #2 | 3481.0 | 33031. | 471540. | 4673.8 | 13700. | 217360. |
| #3 | 3522.9 | 32992. | 477550. | 4736.2 | 13729. | 217490. |

Sample Name: LCS1 Acquired: 06/12/2015 11:42:01 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 | Co2286 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **408.21** | **114.99** | **19.837** | **392.47** | **9.6671** | **10.171** | **10227.** | **20.099** | **99.302** |
| Stddev | 57.43 | 2.45 | .903 | 1.16 | .4235 | .116 | 36. | .271 | .706 |
| %RSD | 14.069 | 2.1347 | 4.5522 | .29570 | 4.3807 | 1.1400 | .35067 | 1.3490 | .71103 |
| #1 | 375.53 | 116.32 | 20.874 | 393.61 | 9.8232 | 10.049 | 10202. | 20.177 | 99.101 |
| #2 | 474.52 | 116.49 | 19.230 | 391.29 | 9.1877 | 10.184 | 10212. | 19.798 | 98.718 |
| #3 | 374.57 | 112.16 | 19.405 | 392.50 | 9.9904 | 10.280 | 10268. | 20.323 | 100.09 |

| Elem | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **48.462** | **209.29** | **19.472** | **9789.8** | **28.823** | **.08458** | **80.866** | **9438.1** | **67.123** |
| Stddev | .836 | 8.20 | 2.645 | 43.5 | .226 | .61077 | .758 | 32.5 | .695 |
| %RSD | 1.7256 | 3.9163 | 13.582 | .44410 | .78430 | 722.15 | .93691 | .34421 | 1.0347 |
| #1 | 47.661 | 208.49 | 21.276 | 9774.4 | 29.084 | -.55285 | 80.504 | 9413.5 | 67.628 |
| #2 | 48.396 | 217.86 | 20.704 | 9756.1 | 28.686 | .14195 | 80.358 | 9425.8 | 66.331 |
| #3 | 49.329 | 201.53 | 16.436 | 9838.9 | 28.699 | .66463 | 81.737 | 9474.9 | 67.411 |

| Elem | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **19.983** | **9815.1** | **51.616** | **.92596** | **97.381** | **123.32** |
| Stddev | .436 | 24.9 | .977 | .37334 | .665 | .78 |
| %RSD | 2.1828 | .25401 | 1.8936 | 40.320 | .68300 | .63362 |
| #1 | 19.940 | 9836.8 | 52.740 | 1.2662 | 96.982 | 123.37 |
| #2 | 20.439 | 9787.9 | 51.139 | .98510 | 98.149 | 122.51 |
| #3 | 19.570 | 9820.7 | 50.968 | .52657 | 97.011 | 124.07 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3314.0** | **33770.** | **484460.** | **4566.9** | **13811.** | **215660.** |
| Stddev | 2.8 | 191. | 4320. | 7.2 | 99. | 1213. |
| %RSD | .08574 | .56495 | .89174 | .15772 | .71387 | .56244 |
| #1 | 3310.7 | 33924. | 486310. | 4570.5 | 13900. | 215570. |
| #2 | 3315.2 | 33556. | 479530. | 4571.7 | 13705. | 214500. |
| #3 | 3316.0 | 33829. | 487560. | 4558.6 | 13828. | 216920. |

Sample Name: MF9M21 Acquired: 06/12/2015 11:44:55 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **30850.** | **1.6189** | **26.037** | **416.03** | **2.4044** | **.15348** | **19062.** | **77.685** |
| Stddev | 57. | 3.7904 | 1.391 | .45 | .0674 | .10702 | 76. | 1.335 |
| %RSD | .18597 | 234.13 | 5.3411 | .10859 | 2.8044 | 69.731 | .39728 | 1.7182 |
| #1 | 30883. | 5.8716 | 27.263 | 416.52 | 2.4020 | .23069 | 19126. | 79.204 |
| #2 | 30883. | -1.4037 | 26.323 | 415.63 | 2.3382 | .03131 | 19082. | 77.150 |
| #3 | 30784. | .38883 | 24.526 | 415.93 | 2.4730 | .19844 | 18978. | 76.700 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **25.910** | **53.367** | **63494.** | **230.05** | **5761.3** | **1461.9** | **1.3535** | **42.286** |
| Stddev | .282 | .201 | 265. | 4.87 | 68.5 | .8 | .2044 | .439 |
| %RSD | 1.0887 | .37630 | .41744 | 2.1191 | 1.1888 | .05467 | 15.103 | 1.0391 |
| #1 | 26.066 | 53.554 | 63800. | 235.33 | 5825.3 | 1461.1 | 1.1480 | 42.793 |
| #2 | 25.584 | 53.155 | 63351. | 229.09 | 5689.1 | 1462.0 | 1.3557 | 42.041 |
| #3 | 26.079 | 53.392 | 63331. | 225.73 | 5769.5 | 1462.7 | 1.5568 | 42.023 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **5317.1** | **4.4711** | **-.39433** | **156.30** | **-2.0068** | **441.45** | **96.920** | **181.91** |
| Stddev | 61.9 | 4.8185 | .75603 | 13.39 | .7205 | 1.99 | 1.286 | 2.90 |
| %RSD | 1.1635 | 107.77 | 191.72 | 8.5635 | 35.905 | .45135 | 1.3265 | 1.5952 |
| #1 | 5246.8 | .20480 | -.14953 | 146.48 | -2.8376 | 440.90 | 98.092 | 185.21 |
| #2 | 5341.2 | 9.6974 | -1.2424 | 150.87 | -1.6291 | 443.67 | 95.545 | 180.78 |
| #3 | 5363.3 | 3.5112 | .20897 | 171.55 | -1.5536 | 439.80 | 97.122 | 179.74 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3386.6** | **34077.** | **495340.** | **4765.1** | **13896.** | **219400.** |
| Stddev | 46.8 | 188. | 2411. | 53.1 | 90. | 1186. |
| %RSD | 1.3815 | .55119 | .48667 | 1.1143 | .64965 | .54048 |
| #1 | 3333.7 | 33923. | 493070. | 4704.9 | 13813. | 219050. |
| #2 | 3403.5 | 34022. | 497870. | 4785.1 | 13883. | 218420. |
| #3 | 3422.5 | 34286. | 495080. | 4805.3 | 13992. | 220720. |

Sample Name: MF9M22 Acquired: 06/12/2015 11:47:47 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **34438.** | **.23597** | **22.081** | **469.90** | **3.0633** | **-.07559** | **17149.** | **78.231** |
| Stddev | 58. | 1.9262 | 4.278 | .97 | .0422 | .07211 | 33. | 1.513 |
| %RSD | .16899 | 816.27 | 19.374 | .20718 | 1.3770 | 95.397 | .19032 | 1.9344 |
| #1 | 34393. | 2.2410 | 20.503 | 468.78 | 3.0462 | .00762 | 17117. | 79.080 |
| #2 | 34418. | .06718 | 26.924 | 470.46 | 3.1113 | -.11458 | 17146. | 79.129 |
| #3 | 34504. | -1.6002 | 18.817 | 470.47 | 3.0323 | -.11980 | 17183. | 76.483 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **27.666** | **59.816** | **75547.** | **144.58** | **4365.6** | **1792.8** | **1.4441** | **48.809** |
| Stddev | .757 | 1.692 | 231. | 3.16 | 17.4 | 2.1 | .0844 | 1.411 |
| %RSD | 2.7347 | 2.8278 | .30579 | 2.1872 | .39786 | .11638 | 5.8463 | 2.8908 |
| #1 | 28.164 | 60.589 | 75296. | 146.02 | 4353.1 | 1794.4 | 1.4665 | 49.145 |
| #2 | 28.038 | 60.983 | 75594. | 146.76 | 4385.5 | 1790.5 | 1.3507 | 50.021 |
| #3 | 26.795 | 57.876 | 75751. | 140.95 | 4358.3 | 1793.5 | 1.5150 | 47.260 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **5168.4** | **-3.6265** | **-1.0213** | **174.40** | **-1.8124** | **566.98** | **114.18** | **113.13** |
| Stddev | 52.0 | 6.3624 | .4309 | 6.06 | 1.0611 | .82 | .30 | 1.77 |
| %RSD | 1.0066 | 175.44 | 42.192 | 3.4745 | 58.546 | .14530 | .26101 | 1.5641 |
| #1 | 5192.0 | .42911 | -1.5188 | 178.73 | -2.7412 | 566.28 | 114.51 | 114.28 |
| #2 | 5204.3 | -.34915 | -.78009 | 176.99 | -.65596 | 566.77 | 114.08 | 114.02 |
| #3 | 5108.7 | -10.959 | -.76502 | 167.47 | -2.0399 | 567.89 | 113.94 | 111.09 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3305.5** | **33659.** | **480690.** | **4655.5** | **13891.** | **216070.** |
| Stddev | 46.2 | 359. | 995. | 66.0 | 131. | 1987. |
| %RSD | 1.3972 | 1.0675 | .20696 | 1.4178 | .94567 | .91975 |
| #1 | 3280.8 | 33276. | 479600. | 4625.7 | 13755. | 216870. |
| #2 | 3277.0 | 33988. | 481540. | 4609.7 | 14017. | 213810. |
| #3 | 3358.8 | 33715. | 480940. | 4731.2 | 13901. | 217540. |

Sample Name: MF9M23 Acquired: 06/12/2015 11:50:37 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **32255.** | **2.2343** | **16.788** | **234.56** | **2.5263** | **-.31066** | **3604.6** | **59.787** |
| Stddev | 138. | 1.5025 | 1.416 | .67 | .2725 | .08082 | 11.3 | .313 |
| %RSD | .42853 | 67.250 | 8.4356 | .28634 | 10.785 | 26.016 | .31279 | .52319 |
| #1 | 32225. | 3.5741 | 15.190 | 234.74 | 2.2702 | -.24036 | 3612.2 | 59.471 |
| #2 | 32406. | 2.5189 | 17.283 | 235.12 | 2.4962 | -.29264 | 3609.9 | 59.792 |
| #3 | 32135. | .60977 | 17.890 | 233.82 | 2.8126 | -.39896 | 3591.6 | 60.097 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **13.378** | **36.066** | **50537.** | **34.138** | **2914.3** | **224.19** | **1.2842** | **29.895** |
| Stddev | .350 | 1.019 | 188. | .728 | 56.0 | 1.62 | .6438 | .408 |
| %RSD | 2.6151 | 2.8244 | .37254 | 2.1317 | 1.9205 | .72050 | 50.136 | 1.3659 |
| #1 | 13.655 | 35.568 | 50743. | 34.498 | 2978.9 | 225.09 | 1.5073 | 29.522 |
| #2 | 12.985 | 35.392 | 50494. | 34.615 | 2881.9 | 225.17 | .55848 | 29.831 |
| #3 | 13.495 | 37.238 | 50374. | 33.300 | 2882.1 | 222.33 | 1.7868 | 30.331 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **4465.3** | **-5.4809** | **-.89572** | **152.75** | **2.2165** | **507.32** | **89.923** | **74.975** |
| Stddev | 67.3 | 2.6249 | .48493 | 8.99 | .0821 | 2.35 | 1.616 | 1.030 |
| %RSD | 1.5068 | 47.893 | 54.139 | 5.8838 | 3.7058 | .46252 | 1.7977 | 1.3735 |
| #1 | 4497.6 | -2.6717 | -1.4289 | 149.10 | 2.2071 | 507.50 | 88.183 | 73.912 |
| #2 | 4510.4 | -7.8711 | -.48103 | 162.99 | 2.1395 | 509.57 | 91.378 | 75.045 |
| #3 | 4388.0 | -5.8998 | -.77720 | 146.17 | 2.3030 | 504.89 | 90.207 | 75.968 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3344.7** | **33299.** | **483400.** | **4660.9** | **13797.** | **217230.** |
| Stddev | 3.5 | 62. | 5200. | 15.8 | 47. | 464. |
| %RSD | .10406 | .18695 | 1.0757 | .33933 | .34146 | .21366 |
| #1 | 3340.8 | 33330. | 487800. | 4643.3 | 13791. | 217720. |
| #2 | 3347.6 | 33339. | 477660. | 4665.5 | 13846. | 217190. |
| #3 | 3345.6 | 33227. | 484740. | 4673.9 | 13753. | 216790. |

Sample Name: MF9M24 Acquired: 06/12/2015 11:53:30 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **48909.** | **2.8490** | **22.225** | **365.57** | **3.6516** | **-.39796** | **5899.4** | **89.444** |
| Stddev | 292. | 2.7913 | 3.070 | 1.34 | .1587 | .04770 | 8.2 | .283 |
| %RSD | .59799 | 97.974 | 13.815 | .36605 | 4.3463 | 11.987 | .13921 | .31666 |
| #1 | 48596. | -.37407 | 24.811 | 364.12 | 3.4718 | -.44109 | 5890.2 | 89.661 |
| #2 | 48957. | 4.4712 | 23.033 | 365.83 | 3.7107 | -.34672 | 5906.0 | 89.547 |
| #3 | 49175. | 4.4500 | 18.832 | 366.75 | 3.7723 | -.40607 | 5902.0 | 89.123 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **28.480** | **57.908** | **85336.** | **44.507** | **4881.9** | **578.03** | **1.6264** | **49.062** |
| Stddev | .374 | .066 | 190. | 1.160 | 17.4 | 4.10 | .2466 | .334 |
| %RSD | 1.3145 | .11441 | .22218 | 2.6056 | .35679 | .70970 | 15.163 | .68002 |
| #1 | 28.502 | 57.949 | 85239. | 43.460 | 4887.5 | 573.47 | 1.8287 | 49.447 |
| #2 | 28.843 | 57.831 | 85555. | 45.754 | 4895.8 | 579.19 | 1.6988 | 48.851 |
| #3 | 28.095 | 57.942 | 85215. | 44.307 | 4862.3 | 581.43 | 1.3517 | 48.889 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **6207.6** | **-1.9552** | **-.80938** | **180.14** | **-3.3560** | **614.03** | **135.57** | **101.38** |
| Stddev | 21.9 | 3.3823 | .57712 | 7.30 | .6804 | 3.58 | .65 | .53 |
| %RSD | .35359 | 172.99 | 71.304 | 4.0537 | 20.275 | .58231 | .48251 | .52523 |
| #1 | 6184.2 | -2.6627 | -1.4051 | 172.09 | -4.0743 | 610.70 | 136.12 | 100.76 |
| #2 | 6227.8 | 1.7250 | -.77023 | 181.99 | -3.2727 | 613.59 | 135.74 | 101.70 |
| #3 | 6210.7 | -4.9277 | -.25283 | 186.34 | -2.7211 | 617.81 | 134.85 | 101.68 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3378.8** | **33649.** | **487220.** | **4775.3** | **14055.** | **222380.** |
| Stddev | 14.2 | 17. | 1774. | 20.3 | 51. | 804. |
| %RSD | .41919 | .04981 | .36402 | .42560 | .36094 | .36133 |
| #1 | 3362.6 | 33634. | 487790. | 4751.9 | 14019. | 223070. |
| #2 | 3389.1 | 33645. | 488640. | 4786.0 | 14033. | 222570. |
| #3 | 3384.7 | 33667. | 485230. | 4788.0 | 14113. | 221500. |

Sample Name: MF9M25 Acquired: 06/12/2015 11:56:20 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **55461.** | **1.9183** | **32.973** | **729.98** | **4.3549** | **-.15885** | **28963.** | **93.608** |
| Stddev | 211. | 3.2389 | .439 | 1.52 | .1367 | .14044 | 62. | .215 |
| %RSD | .38115 | 168.84 | 1.3328 | .20828 | 3.1391 | 88.416 | .21453 | .23012 |
| #1 | 55377. | 3.5520 | 33.455 | 730.76 | 4.4605 | .00328 | 28940. | 93.362 |
| #2 | 55702. | 4.0150 | 32.872 | 730.95 | 4.4038 | -.23667 | 29033. | 93.758 |
| #3 | 55305. | -1.8121 | 32.594 | 728.23 | 4.2005 | -.24315 | 28915. | 93.706 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **53.531** | **70.372** | **96222.** | **168.31** | **8456.0** | **2296.6** | **1.4417** | **68.614** |
| Stddev | .554 | .827 | 91. | 1.74 | 37.5 | 13.7 | .0723 | .287 |
| %RSD | 1.0358 | 1.1748 | .09490 | 1.0326 | .44342 | .59786 | 5.0171 | .41809 |
| #1 | 54.139 | 69.497 | 96117. | 167.67 | 8419.2 | 2302.3 | 1.5226 | 68.353 |
| #2 | 53.053 | 70.478 | 96284. | 166.99 | 8494.2 | 2306.5 | 1.3832 | 68.568 |
| #3 | 53.400 | 71.140 | 96266. | 170.28 | 8454.6 | 2280.9 | 1.4192 | 68.921 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **7698.1** | **-5.4885** | **-1.1994** | **317.32** | **-3.3876** | **624.93** | **159.50** | **270.60** |
| Stddev | 35.1 | 2.3380 | .1214 | 2.09 | 1.4099 | 3.28 | 1.83 | 1.26 |
| %RSD | .45628 | 42.597 | 10.118 | .65890 | 41.621 | .52446 | 1.1474 | .46623 |
| #1 | 7737.4 | -4.1125 | -1.1789 | 319.40 | -3.4270 | 624.45 | 158.07 | 270.97 |
| #2 | 7687.3 | -4.1651 | -1.0897 | 317.34 | -1.9584 | 628.43 | 158.88 | 269.19 |
| #3 | 7669.7 | -8.1880 | -1.3298 | 315.22 | -4.7774 | 621.93 | 161.57 | 271.63 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3303.9** | **33166.** | **473630.** | **4747.0** | **14016.** | **216340.** |
| Stddev | 5.3 | 58. | 4943. | 9.4 | 43. | 780. |
| %RSD | .16034 | .17555 | 1.0436 | .19880 | .30770 | .36065 |
| #1 | 3309.6 | 33203. | 473830. | 4755.7 | 14065. | 217010. |
| #2 | 3302.9 | 33099. | 478470. | 4748.2 | 14001. | 216540. |
| #3 | 3299.1 | 33197. | 468590. | 4737.0 | 13983. | 215480. |

Sample Name: MF9M26 Acquired: 06/12/2015 11:59:10 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **88492.** | **4.4601** | **41.477** | **1043.8** | **6.4480** | **-.71565** | **76372.** |
| Stddev | 423. | 3.2081 | 1.502 | 6.0 | .1261 | .13381 | 572. |
| %RSD | .47801 | 71.928 | 3.6207 | .57854 | 1.9563 | 18.698 | .74846 |
| #1 | 88005. | 8.1523 | 41.773 | 1038.6 | 6.3152 | -.77001 | 75783. |
| #2 | 88766. | 2.3550 | 42.808 | 1042.4 | 6.4624 | -.56321 | 76410. |
| #3 | 88706. | 2.8729 | 39.849 | 1050.4 | 6.5663 | -.81373 | 76924. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **143.85** | **51.465** | **87.917** | **143340.** | **172.07** | **11223.** | **1575.3** |
| Stddev | .82 | .099 | 2.229 | 1129. | 2.90 | 79. | 7.5 |
| %RSD | .57020 | .19214 | 2.5348 | .78738 | 1.6864 | .69945 | .47437 |
| #1 | 143.83 | 51.395 | 85.421 | 142220. | 170.39 | 11159. | 1568.1 |
| #2 | 143.03 | 51.578 | 88.624 | 143330. | 170.41 | 11200. | 1574.9 |
| #3 | 144.67 | 51.422 | 89.707 | 144470. | 175.43 | 11311. | 1583.0 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.3182** | **102.32** | **8712.4** | **.87379** | **-.32078** | **652.64** | **-3.6113** |
| Stddev | .3882 | .76 | 97.2 | 4.5612 | .22524 | 15.49 | 1.5375 |
| %RSD | 16.746 | .74542 | 1.1158 | 522.00 | 70.216 | 2.3737 | 42.575 |
| #1 | 1.9653 | 101.80 | 8605.4 | .77817 | -.53915 | 650.48 | -2.0513 |
| #2 | 2.2553 | 101.97 | 8736.3 | -3.6388 | -.33396 | 638.35 | -3.6573 |
| #3 | 2.7340 | 103.20 | 8795.4 | 5.4820 | -.08924 | 669.10 | -5.1253 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **730.43** | **211.91** | **152.80** |
| Stddev | 6.19 | .44 | 1.69 |
| %RSD | .84708 | .20946 | 1.1069 |
| #1 | 724.13 | 211.52 | 151.44 |
| #2 | 730.66 | 212.39 | 152.27 |
| #3 | 736.50 | 211.82 | 154.70 |

Sample Name: MF9M26 Acquired: 06/12/2015 11:59:10 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3142.6** | **32981.** | **465580.** | **4666.0** | **13908.** | **214130.** |
| Stddev | 4.2 | 70. | 1709. | 7.0 | 7. | 1611. |
| %RSD | .13469 | .21226 | .36696 | .15035 | .05120 | .75210 |
| | | | | | | |
| #1 | 3147.5 | 32917. | 466140. | 4666.3 | 13916. | 215990. |
| #2 | 3139.6 | 32970. | 463660. | 4658.8 | 13902. | 213220. |
| #3 | 3140.9 | 33056. | 466930. | 4672.8 | 13907. | 213180. |

Sample Name: MF9M27 Acquired: 06/12/2015 12:01:57 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **78538.** | **2.8678** | **31.353** | **1186.4** | **5.7716** | **-.53358** | **17185.** |
| Stddev | 51. | 1.4944 | 4.990 | 1.7 | .2241 | .10058 | 15. |
| %RSD | .06473 | 52.111 | 15.916 | .14233 | 3.8822 | 18.850 | .08869 |
| #1 | 78484. | 2.6836 | 36.713 | 1188.3 | 6.0284 | -.46899 | 17195. |
| #2 | 78584. | 1.4740 | 30.503 | 1185.5 | 5.6162 | -.64947 | 17168. |
| #3 | 78546. | 4.4458 | 26.842 | 1185.3 | 5.6702 | -.48229 | 17193. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **124.92** | **62.813** | **80.563** | **116790.** | **105.79** | **10638.** | **902.80** |
| Stddev | .61 | .526 | 1.977 | 35. | 5.01 | 20. | 1.48 |
| %RSD | .49189 | .83720 | 2.4539 | .03021 | 4.7372 | .18397 | .16401 |
| #1 | 125.55 | 62.936 | 78.388 | 116790. | 107.13 | 10619. | 901.12 |
| #2 | 124.89 | 63.267 | 81.051 | 116750. | 110.00 | 10658. | 903.41 |
| #3 | 124.32 | 62.237 | 82.250 | 116820. | 100.25 | 10636. | 903.89 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **1.3835** | **75.275** | **7277.8** | **2.3535** | **-1.9246** | **524.81** | **-3.8502** |
| Stddev | .1926 | .540 | 34.2 | .9350 | .4400 | 10.11 | 1.8735 |
| %RSD | 13.920 | .71677 | .47005 | 39.729 | 22.864 | 1.9269 | 48.659 |
| #1 | 1.2076 | 75.317 | 7250.1 | 2.2339 | -1.9702 | 535.60 | -4.9353 |
| #2 | 1.5893 | 75.792 | 7267.3 | 1.4840 | -2.3400 | 523.28 | -4.9284 |
| #3 | 1.3537 | 74.716 | 7316.0 | 3.3425 | -1.4635 | 515.55 | -1.6869 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **741.46** | **211.02** | **128.00** |
| Stddev | 3.33 | 2.37 | 1.16 |
| %RSD | .44976 | 1.1223 | .90386 |
| #1 | 737.68 | 211.39 | 128.13 |
| #2 | 742.73 | 213.19 | 129.09 |
| #3 | 743.98 | 208.49 | 126.79 |

Sample Name: MF9M27 Acquired: 06/12/2015 12:01:57 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3209.7** | **32721.** | **465350.** | **4702.7** | **13895.** | **215830.** |
| Stddev | 20.4 | 118. | 2037. | 25.4 | 62. | 3621. |
| %RSD | .63540 | .36108 | .43781 | .54103 | .44413 | 1.6775 |
| | | | | | | |
| #1 | 3186.9 | 32779. | 463480. | 4675.6 | 13915. | 219650. |
| #2 | 3216.1 | 32798. | 465060. | 4706.2 | 13945. | 212450. |
| #3 | 3226.1 | 32585. | 467520. | 4726.2 | 13826. | 215390. |

Sample Name: MF9M27S Acquired: 06/12/2015 12:04:47 Type: RQC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **103600.** | F **43.028** | **102.73** | **5019.3** | **111.48** | **99.178** | **18758.** |
| Stddev | 379. | 1.549 | 2.51 | 27.5 | 1.25 | .413 | 69. |
| %RSD | .36548 | 3.5995 | 2.4476 | .54855 | 1.1173 | .41633 | .36655 |
| #1 | 104040. | 42.908 | 101.46 | 5050.1 | 112.68 | 99.653 | 18838. |
| #2 | 103410. | 44.633 | 101.11 | 4996.9 | 110.19 | 98.983 | 18723. |
| #3 | 103360. | 41.543 | 105.63 | 5011.0 | 111.59 | 98.899 | 18715. |
| Check ? | None | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | None |
| Value | | 200.00 | | | | | |
| Range | | -25.000% | | | | | |
| | None | | 71.380 | 3832.9 | 105.71 | 99.712 | None |
| Recovery | | 40.160 | 89.226% | 95.824% | 105.71% | 99.712% | |
| % Recovery | | 20.080% | | | | | |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **544.78** | **1104.9** | **588.90** | **135320.** | **152.22** | **12287.** | **1961.2** |
| Stddev | 2.66 | 5.6 | 11.61 | 592. | 2.68 | 73. | 5.7 |
| %RSD | .48884 | .50354 | 1.9710 | .43753 | 1.7630 | .59594 | .29052 |
| #1 | 547.50 | 1111.3 | 575.52 | 136010. | 154.99 | 12354. | 1967.8 |
| #2 | 542.17 | 1101.0 | 595.05 | 134990. | 149.63 | 12209. | 1958.2 |
| #3 | 544.67 | 1102.4 | 596.15 | 134970. | 152.06 | 12298. | 1957.6 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | None | Chk Pass | None | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |
| | 419.86 | 1042.1 | 508.34 | None | 46.432 | None | 1058.4 |
| Recovery | 104.96% | 104.21% | 101.67% | | 116.08% | | 105.84% |
| % Recovery | | | | | | | |

Sample Name: MF9M27S Acquired: 06/12/2015 12:04:47 Type: RQC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **1.4218** | **1121.1** | **9089.6** | **86.209** | **92.971** | **519.39** | **102.02** |
| Stddev | .1834 | 6.0 | 80.2 | 4.029 | 1.588 | 8.86 | 1.62 |
| %RSD | 12.899 | .53843 | .88184 | 4.6741 | 1.7079 | 1.7065 | 1.5884 |
| #1 | 1.2296 | 1126.3 | 9177.4 | 89.046 | 91.139 | 527.12 | 101.01 |
| #2 | 1.5949 | 1114.5 | 9071.2 | 81.596 | 93.948 | 521.34 | 101.16 |
| #3 | 1.4409 | 1122.4 | 9020.2 | 87.983 | 93.827 | 509.72 | 103.89 |
| Check ? | None | Chk Pass | None | Chk Pass | Chk Pass | None | Chk Pass |
| Value Range | None | 1045.8 | None | 83.855 | 94.896 | None | 105.87 |
| Recovery % Recovery | | 104.58% | | 83.855% | 94.896% | | 105.87% |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **856.95** | **1253.8** | **1161.2** |
| Stddev | 6.71 | 16.2 | 5.3 |
| %RSD | .78332 | 1.2960 | .45388 |
| #1 | 864.45 | 1236.8 | 1167.0 |
| #2 | 851.50 | 1255.3 | 1156.7 |
| #3 | 854.91 | 1269.2 | 1160.0 |
| Check ? | None | Chk Pass | Chk Pass |
| Value Range | None | 1042.7 | 1033.2 |
| Recovery % Recovery | | 104.27% | 103.32% |

Sample Name: MF9M27S Acquired: 06/12/2015 12:04:47 Type: RQC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3241.6** | **33595.** | **472470.** | **4816.0** | **14265.** | **220810.** |
| Stddev | 12.3 | 133. | 4743. | 12.5 | 68. | 3111. |
| %RSD | .37909 | .39487 | 1.0039 | .25998 | .47961 | 1.4087 |
| | | | | | | |
| #1 | 3231.0 | 33695. | 476500. | 4807.3 | 14303. | 224390. |
| #2 | 3238.8 | 33444. | 473650. | 4810.3 | 14186. | 218710. |
| #3 | 3255.1 | 33644. | 467240. | 4830.3 | 14305. | 219350. |

Sample Name: MF9M27D Acquired: 06/12/2015 12:07:28 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **133040.** | **4.9087** | **45.348** | **1012.4** | **7.9989** | **-1.0053** | **17634.** |
| Stddev | 805. | 1.6528 | .620 | 4.1 | .2676 | .1287 | 65. |
| %RSD | .60490 | 33.670 | 1.3672 | .40800 | 3.3450 | 12.799 | .37011 |
| #1 | 132670. | 6.6556 | 45.207 | 1009.7 | 7.7526 | -1.0759 | 17559. |
| #2 | 133960. | 3.3697 | 44.810 | 1017.1 | 8.2836 | -.85679 | 17666. |
| #3 | 132490. | 4.7009 | 46.026 | 1010.3 | 7.9605 | -1.0832 | 17678. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **198.14** | **62.790** | **94.426** | **182050.** | **108.93** | **15867.** | **1017.3** |
| Stddev | .44 | .670 | 2.217 | 696. | 3.41 | 18. | 5.6 |
| %RSD | .22354 | 1.0676 | 2.3474 | .38220 | 3.1333 | .11049 | .54619 |
| #1 | 197.74 | 63.535 | 91.887 | 181280. | 107.53 | 15855. | 1011.3 |
| #2 | 198.61 | 62.236 | 95.419 | 182220. | 106.45 | 15859. | 1022.3 |
| #3 | 198.06 | 62.600 | 95.974 | 182640. | 112.82 | 15887. | 1018.1 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.6383** | **109.14** | **11653.** | **-.94802** | **-1.3076** | **637.65** | **-6.6694** |
| Stddev | .4633 | .47 | 114. | 2.7932 | .4410 | 5.86 | 1.9776 |
| %RSD | 17.561 | .43055 | .97665 | 294.63 | 33.723 | .91906 | 29.651 |
| #1 | 2.2292 | 109.68 | 11539. | -2.8636 | -1.2225 | 643.96 | -4.6294 |
| #2 | 3.1414 | 108.81 | 11654. | 2.2569 | -.91544 | 636.60 | -8.5779 |
| #3 | 2.5442 | 108.93 | 11767. | -2.2374 | -1.7850 | 632.39 | -6.8009 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **914.67** | **295.21** | **175.83** |
| Stddev | .90 | 1.81 | .33 |
| %RSD | .09788 | .61280 | .18527 |
| #1 | 914.50 | 297.27 | 176.01 |
| #2 | 915.64 | 293.85 | 175.46 |
| #3 | 913.87 | 294.53 | 176.03 |

Sample Name: MF9M27D Acquired: 06/12/2015 12:07:28 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3176.4** | **33495.** | **470520.** | **4761.1** | **14255.** | **218810.** |
| Stddev | 2.6 | 175. | 1713. | 11.8 | 74. | 3257. |
| %RSD | .08136 | .52245 | .36411 | .24847 | .51670 | 1.4884 |
| | | | | | | |
| #1 | 3173.5 | 33652. | 468550. | 4754.7 | 14337. | 222560. |
| #2 | 3177.2 | 33307. | 471590. | 4753.9 | 14195. | 217130. |
| #3 | 3178.5 | 33527. | 471430. | 4774.8 | 14233. | 216740. |

Sample Name: MF9M27L Acquired: 06/12/2015 12:10:14 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **14950.** | **4.3962** | **6.6366** | **226.77** | **1.0200** | **-.12272** | **3330.6** | **24.698** |
| Stddev | 50. | 2.0710 | 1.0704 | 1.26 | .2259 | .12427 | 5.0 | .197 |
| %RSD | .33771 | 47.108 | 16.129 | .55749 | 22.146 | 101.26 | .15137 | .79653 |
| #1 | 14954. | 3.2519 | 7.4500 | 228.23 | 1.2663 | -.13891 | 3324.9 | 24.907 |
| #2 | 14999. | 3.1498 | 5.4239 | 226.05 | .82250 | -.23810 | 3332.8 | 24.670 |
| #3 | 14898. | 6.7868 | 7.0359 | 226.03 | .97120 | .00884 | 3334.3 | 24.516 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **11.448** | **15.502** | **22463.** | **21.201** | **2011.7** | **172.69** | **.11009** | **13.663** |
| Stddev | .531 | 1.110 | 40. | 1.102 | 44.3 | 1.19 | .18778 | .090 |
| %RSD | 4.6411 | 7.1582 | .17747 | 5.1966 | 2.2027 | .68851 | 170.58 | .66032 |
| #1 | 11.124 | 14.422 | 22426. | 20.554 | 1992.0 | 173.76 | .19702 | 13.725 |
| #2 | 11.159 | 16.639 | 22459. | 22.473 | 2062.4 | 172.91 | .23865 | 13.704 |
| #3 | 12.062 | 15.445 | 22505. | 20.575 | 1980.6 | 171.41 | -.10541 | 13.559 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **1374.7** | **.26568** | **-.45797** | **119.90** | **-.72818** | **139.11** | **39.355** | **24.709** |
| Stddev | 55.4 | 8.2158 | .65488 | 17.50 | 1.6312 | .92 | .572 | .163 |
| %RSD | 4.0287 | 3092.3 | 143.00 | 14.596 | 224.00 | .65870 | 1.4546 | .65828 |
| #1 | 1330.3 | -9.0848 | -1.0824 | 140.03 | -.32073 | 138.07 | 38.747 | 24.746 |
| #2 | 1436.7 | 6.3285 | -.51519 | 108.29 | -2.5244 | 139.80 | 39.433 | 24.851 |
| #3 | 1357.0 | 3.5534 | .22364 | 111.38 | .66062 | 139.46 | 39.884 | 24.532 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3539.1** | **34160.** | **497980.** | **4832.6** | **14320.** | **225050.** |
| Stddev | 6.9 | 178. | 5223. | 3.3 | 87. | 2446. |
| %RSD | .19367 | .52084 | 1.0489 | .06804 | .61045 | 1.0866 |
| #1 | 3541.5 | 34010. | 503790. | 4836.4 | 14279. | 223520. |
| #2 | 3531.4 | 34356. | 496470. | 4830.8 | 14420. | 223760. |
| #3 | 3544.5 | 34112. | 493680. | 4830.6 | 14260. | 227870. |

Sample Name: MF9M28 Acquired: 06/12/2015 12:13:07 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **102320.** | **4.2865** | **47.909** | **718.50** | **6.8923** | **-1.0126** | **25564.** |
| Stddev | 115. | 3.1668 | 4.430 | 2.56 | .1376 | .0250 | 36. |
| %RSD | .11241 | 73.879 | 9.2457 | .35614 | 1.9972 | 2.4687 | .13965 |
| #1 | 102440. | 2.2281 | 49.662 | 721.23 | 6.9633 | -1.0371 | 25523. |
| #2 | 102210. | 7.9331 | 51.194 | 718.10 | 6.9799 | -.98714 | 25584. |
| #3 | 102320. | 2.6982 | 42.871 | 716.16 | 6.7336 | -1.0137 | 25585. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **147.71** | **48.380** | **67.023** | **159900.** | **130.49** | **13898.** | **1008.1** |
| Stddev | .51 | .710 | 1.405 | 426. | 4.44 | 39. | 1.9 |
| %RSD | .34697 | 1.4677 | 2.0969 | .26619 | 3.4053 | .28408 | .19250 |
| #1 | 147.39 | 49.098 | 65.979 | 159410. | 132.24 | 13932. | 1010.1 |
| #2 | 148.31 | 48.363 | 68.621 | 160160. | 133.79 | 13854. | 1006.2 |
| #3 | 147.45 | 47.678 | 66.470 | 160130. | 125.44 | 13907. | 1008.1 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.1140** | **94.446** | **10933.** | **-.82379** | **-1.0797** | **683.15** | **-6.9682** |
| Stddev | .0571 | .506 | 58. | 1.2812 | .4188 | 9.74 | 3.6992 |
| %RSD | 2.7019 | .53620 | .52600 | 155.52 | 38.785 | 1.4264 | 53.086 |
| #1 | 2.0572 | 93.890 | 10975. | .62997 | -1.1319 | 692.70 | -3.2173 |
| #2 | 2.1714 | 94.882 | 10867. | -1.7881 | -1.4699 | 673.22 | -10.613 |
| #3 | 2.1135 | 94.565 | 10956. | -1.3132 | -.63729 | 683.53 | -7.0739 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **820.22** | **241.54** | **214.73** |
| Stddev | 4.48 | .39 | .94 |
| %RSD | .54559 | .15964 | .43723 |
| #1 | 818.95 | 241.80 | 213.87 |
| #2 | 816.52 | 241.72 | 215.73 |
| #3 | 825.20 | 241.10 | 214.60 |

Sample Name: MF9M28 Acquired: 06/12/2015 12:13:07 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3166.6** | **33418.** | **465120.** | **4687.1** | **14134.** | **216840.** |
| Stddev | 3.7 | 35. | 1472. | 3.1 | 43. | 3171. |
| %RSD | .11647 | .10535 | .31652 | .06694 | .30514 | 1.4624 |
| | | | | | | |
| #1 | 3170.8 | 33458. | 466810. | 4690.4 | 14183. | 220020. |
| #2 | 3163.9 | 33395. | 464170. | 4684.2 | 14100. | 213680. |
| #3 | 3165.1 | 33400. | 464370. | 4686.7 | 14120. | 216830. |

Sample Name: MF9M29 Acquired: 06/12/2015 12:15:54 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **92836.** | **3.4498** | **36.852** | **1160.1** | **7.4734** | **-1.1857** | **32833.** |
| Stddev | 482. | 1.8087 | 1.652 | 5.2 | .2037 | .0775 | 97. |
| %RSD | .51908 | 52.429 | 4.4816 | .44666 | 2.7261 | 6.5391 | .29509 |
| #1 | 93275. | 1.3666 | 35.836 | 1165.6 | 7.3023 | -1.0991 | 32811. |
| #2 | 92913. | 4.6197 | 35.962 | 1159.2 | 7.4192 | -1.2092 | 32939. |
| #3 | 92321. | 4.3631 | 38.758 | 1155.4 | 7.6988 | -1.2487 | 32749. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **134.78** | **73.998** | **74.807** | **149100.** | **126.02** | **13466.** | **2418.1** |
| Stddev | .42 | .954 | .835 | 645. | 2.07 | 90. | 9.8 |
| %RSD | .31002 | 1.2890 | 1.1166 | .43267 | 1.6413 | .66602 | .40714 |
| #1 | 135.21 | 75.086 | 74.289 | 148750. | 124.86 | 13543. | 2422.0 |
| #2 | 134.37 | 73.608 | 74.361 | 149840. | 128.41 | 13487. | 2425.5 |
| #3 | 134.75 | 73.302 | 75.770 | 148700. | 124.80 | 13367. | 2406.9 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **1.9478** | **103.04** | **8219.5** | **-3.3827** | **-1.3027** | **962.48** | **-6.6013** |
| Stddev | .1994 | .70 | 41.7 | 4.5179 | .2024 | 8.32 | .3534 |
| %RSD | 10.237 | .67750 | .50705 | 133.56 | 15.538 | .86455 | 5.3542 |
| #1 | 1.7752 | 103.63 | 8173.1 | -5.8241 | -1.0826 | 952.87 | -7.0094 |
| #2 | 2.1660 | 102.27 | 8231.5 | -6.1546 | -1.3447 | 967.37 | -6.3898 |
| #3 | 1.9021 | 103.21 | 8253.8 | 1.8307 | -1.4808 | 967.20 | -6.4049 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **634.56** | **208.03** | **137.30** |
| Stddev | .79 | 1.12 | .84 |
| %RSD | .12526 | .53602 | .60907 |
| #1 | 635.15 | 209.23 | 138.24 |
| #2 | 633.66 | 207.81 | 136.64 |
| #3 | 634.87 | 207.04 | 137.01 |

Sample Name: MF9M29 Acquired: 06/12/2015 12:15:54 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3176.0** | **33416.** | **474370.** | **4704.0** | **14060.** | **218260.** |
| Stddev | 13.8 | 334. | 2379. | 19.3 | 176. | 2197. |
| %RSD | .43431 | 1.0008 | .50159 | .41121 | 1.2544 | 1.0065 |
| | | | | | | |
| #1 | 3161.9 | 33626. | 473380. | 4683.7 | 14189. | 220700. |
| #2 | 3189.5 | 33031. | 472650. | 4722.2 | 13859. | 217640. |
| #3 | 3176.5 | 33593. | 477090. | 4706.1 | 14132. | 216440. |

Sample Name: MF9M30 Acquired: 06/12/2015 12:18:43 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **104100.** | **.78316** | **51.472** | **1386.2** | **8.7880** | **-1.6053** | **27757.** |
| Stddev | 563. | 2.0602 | 2.816 | 9.0 | .2364 | .1266 | 157. |
| %RSD | .54039 | 263.06 | 5.4701 | .64900 | 2.6903 | 7.8884 | .56617 |
| #1 | 103450. | 3.1520 | 48.617 | 1376.1 | 8.8926 | -1.5423 | 27679. |
| #2 | 104500. | -.21227 | 54.247 | 1393.4 | 8.9541 | -1.7510 | 27938. |
| #3 | 104330. | -.59029 | 51.552 | 1389.1 | 8.5173 | -1.5225 | 27654. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **147.90** | **69.024** | **91.586** | **186250.** | **78.150** | **15319.** | **3362.4** |
| Stddev | 1.13 | .380 | 1.767 | 1175. | 1.164 | 62. | 9.6 |
| %RSD | .76544 | .55000 | 1.9293 | .63086 | 1.4893 | .40201 | .28490 |
| #1 | 146.70 | 68.939 | 89.611 | 186450. | 76.925 | 15324. | 3353.0 |
| #2 | 148.03 | 68.693 | 93.018 | 187310. | 79.241 | 15378. | 3372.2 |
| #3 | 148.96 | 69.438 | 92.128 | 184980. | 78.284 | 15255. | 3362.1 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.0597** | **123.82** | **7595.3** | **-7.8957** | **-1.3709** | **1065.9** | **-7.7627** |
| Stddev | .1036 | 2.24 | 26.8 | 6.7340 | .4547 | 9.6 | 1.4689 |
| %RSD | 5.0307 | 1.8090 | .35303 | 85.286 | 33.163 | .89798 | 18.922 |
| #1 | 1.9446 | 121.66 | 7606.2 | -2.2525 | -.93501 | 1063.0 | -7.4672 |
| #2 | 2.0890 | 123.66 | 7615.0 | -15.350 | -1.3356 | 1076.6 | -6.4641 |
| #3 | 2.1456 | 126.13 | 7564.8 | -6.0847 | -1.8422 | 1058.2 | -9.3568 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **490.84** | **268.17** | **147.80** |
| Stddev | 3.30 | 1.24 | .94 |
| %RSD | .67277 | .46103 | .63260 |
| #1 | 489.98 | 266.74 | 147.13 |
| #2 | 494.49 | 268.80 | 147.41 |
| #3 | 488.06 | 268.95 | 148.87 |

Sample Name: MF9M30 Acquired: 06/12/2015 12:18:43 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3203.5** | **33946.** | **476830.** | **4768.5** | **14353.** | **222260.** |
| Stddev | 13.5 | 79. | 1965. | 14.2 | 80. | 1926. |
| %RSD | .42085 | .23306 | .41206 | .29801 | .55714 | .86663 |
| | | | | | | |
| #1 | 3218.1 | 33960. | 478840. | 4783.3 | 14323. | 223980. |
| #2 | 3200.8 | 33861. | 476730. | 4767.3 | 14293. | 220180. |
| #3 | 3191.5 | 34018. | 474910. | 4754.9 | 14444. | 222610. |

Sample Name: MF9M31 Acquired: 06/12/2015 12:21:29 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **68885.** | **4.3766** | **28.654** | **680.20** | **4.2420** | **-.19763** | **57765.** |
| Stddev | 658. | 1.4403 | 1.745 | 5.20 | .0385 | .17814 | 383. |
| %RSD | .95524 | 32.909 | 6.0902 | .76476 | .90826 | 90.134 | .66345 |
| #1 | 68312. | 4.4786 | 30.215 | 675.98 | 4.2796 | -.13975 | 57426. |
| #2 | 68740. | 5.7632 | 28.978 | 678.59 | 4.2436 | -.05564 | 57687. |
| #3 | 69604. | 2.8880 | 26.770 | 686.01 | 4.2026 | -.39751 | 58181. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **113.51** | **37.208** | **97.674** | **105190.** | **229.19** | **10876.** | **1903.5** |
| Stddev | .49 | .910 | 1.759 | 640. | 4.16 | 87. | 15.4 |
| %RSD | .42943 | 2.4449 | 1.8009 | .60852 | 1.8144 | .79935 | .80901 |
| #1 | 113.02 | 38.205 | 95.731 | 104640. | 227.81 | 10781. | 1888.7 |
| #2 | 113.50 | 36.997 | 99.157 | 105020. | 225.90 | 10894. | 1902.4 |
| #3 | 114.00 | 36.423 | 98.135 | 105890. | 233.87 | 10952. | 1919.4 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.0204** | **69.911** | **9268.3** | **2.1278** | **-.77159** | **321.72** | **-5.7560** |
| Stddev | .1900 | .541 | 99.5 | 5.7795 | .11301 | 6.56 | .7320 |
| %RSD | 9.4043 | .77350 | 1.0734 | 271.62 | 14.646 | 2.0379 | 12.717 |
| #1 | 2.1272 | 69.574 | 9156.3 | -3.3489 | -.90166 | 315.28 | -6.2271 |
| #2 | 1.8010 | 70.534 | 9302.0 | 8.1687 | -.71562 | 328.38 | -6.1283 |
| #3 | 2.1329 | 69.623 | 9346.5 | 1.5637 | -.69749 | 321.49 | -4.9127 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **802.62** | **172.46** | **183.71** |
| Stddev | 3.34 | .62 | .19 |
| %RSD | .41670 | .35895 | .10213 |
| #1 | 799.16 | 172.02 | 183.90 |
| #2 | 805.84 | 173.17 | 183.52 |
| #3 | 802.87 | 172.19 | 183.72 |

Sample Name: MF9M31 Acquired: 06/12/2015 12:21:29 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3159.9** | **33389.** | **471240.** | **4636.4** | **13923.** | **215240.** |
| Stddev | 5.0 | 259. | 1309. | 7.7 | 79. | 1745. |
| %RSD | .15944 | .77584 | .27771 | .16704 | .56744 | .81057 |
| | | | | | | |
| #1 | 3155.2 | 33681. | 469740. | 4641.3 | 14009. | 217000. |
| #2 | 3159.2 | 33298. | 471890. | 4640.4 | 13903. | 213510. |
| #3 | 3165.2 | 33187. | 472100. | 4627.4 | 13855. | 215210. |

Sample Name: MF9M32 Acquired: 06/12/2015 12:24:20 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **146690.** | **4.2101** | **54.613** | **815.67** | **7.1353** | **-1.6630** | **31137.** |
| Stddev | 803. | 2.5627 | 2.272 | 3.74 | .3852 | .1426 | 107. |
| %RSD | .54744 | 60.871 | 4.1607 | .45867 | 5.3979 | 8.5738 | .34397 |
| #1 | 147620. | 1.4098 | 53.165 | 819.98 | 6.6909 | -1.6838 | 31260. |
| #2 | 146230. | 6.4386 | 53.443 | 813.70 | 7.3717 | -1.5111 | 31060. |
| #3 | 146230. | 4.7818 | 57.232 | 813.32 | 7.3433 | -1.7940 | 31092. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **210.01** | **55.373** | **87.094** | **208820.** | **119.73** | **15643.** | **2067.9** |
| Stddev | .53 | 1.334 | 1.036 | 446. | .38 | 134. | 7.0 |
| %RSD | .25047 | 2.4099 | 1.1895 | .21350 | .31758 | .85880 | .33846 |
| #1 | 209.55 | 56.333 | 87.419 | 209250. | 119.62 | 15793. | 2075.3 |
| #2 | 210.58 | 55.938 | 87.928 | 208360. | 120.16 | 15534. | 2067.2 |
| #3 | 209.91 | 53.849 | 85.934 | 208850. | 119.42 | 15602. | 2061.4 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **3.3835** | **127.31** | **14091.** | **-3.5164** | **-1.5739** | **543.60** | **-9.6733** |
| Stddev | .1703 | .24 | 20. | 7.8948 | .2898 | 16.87 | 2.2732 |
| %RSD | 5.0319 | .18474 | .14249 | 224.51 | 18.409 | 3.1029 | 23.500 |
| #1 | 3.2112 | 127.18 | 14114. | -12.629 | -1.9045 | 554.06 | -11.106 |
| #2 | 3.3876 | 127.17 | 14079. | 1.2492 | -1.4531 | 524.14 | -7.0522 |
| #3 | 3.5517 | 127.58 | 14080. | .8310 | -1.3641 | 552.59 | -10.862 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **949.94** | **306.88** | **167.20** |
| Stddev | 2.89 | 4.04 | .65 |
| %RSD | .30417 | 1.3152 | .39035 |
| #1 | 948.74 | 311.07 | 166.46 |
| #2 | 953.24 | 306.54 | 167.45 |
| #3 | 947.85 | 303.02 | 167.69 |

Sample Name: MF9M32 Acquired: 06/12/2015 12:24:20 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3065.3** | **32967.** | **460760.** | **4599.0** | **13890.** | **212700.** |
| Stddev | 4.0 | 71. | 3495. | 6.8 | 15. | 1502. |
| %RSD | .13021 | .21567 | .75857 | .14778 | .10946 | .70626 |
| | | | | | | |
| #1 | 3064.8 | 32916. | 456860. | 4596.3 | 13884. | 213590. |
| #2 | 3061.6 | 32936. | 461810. | 4594.0 | 13880. | 210970. |
| #3 | 3069.6 | 33048. | 463610. | 4606.8 | 13908. | 213540. |

Sample Name: MF9M33 Acquired: 06/12/2015 12:27:06 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **50829.** | **2.7220** | **31.515** | **451.91** | **4.2074** | **-.43660** | **14876.** | **105.39** |
| Stddev | 529. | 1.6186 | 4.278 | .50 | .1729 | .10401 | 69. | .50 |
| %RSD | 1.0399 | 59.463 | 13.575 | .11099 | 4.1106 | 23.823 | .46306 | .47315 |
| #1 | 50527. | 4.5010 | 33.218 | 452.37 | 4.3998 | -.36369 | 14810. | 105.86 |
| #2 | 51439. | 2.3286 | 26.648 | 451.99 | 4.0650 | -.39039 | 14947. | 104.86 |
| #3 | 50521. | 1.3363 | 34.680 | 451.38 | 4.1573 | -.55571 | 14870. | 105.44 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **33.260** | **48.807** | **96840.** | **82.557** | **6342.1** | **1014.8** | **1.6169** | **60.998** |
| Stddev | .275 | .283 | 491. | 1.330 | 12.5 | 3.3 | .4623 | .413 |
| %RSD | .82665 | .58037 | .50666 | 1.6113 | .19661 | .32584 | 28.594 | .67787 |
| #1 | 33.546 | 48.514 | 96273. | 83.919 | 6330.8 | 1014.6 | 1.6562 | 60.830 |
| #2 | 32.998 | 48.829 | 97126. | 81.261 | 6340.0 | 1018.2 | 1.1362 | 60.695 |
| #3 | 33.236 | 49.079 | 97120. | 82.490 | 6355.4 | 1011.6 | 2.0583 | 61.469 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **5438.1** | **-7.1478** | **-.53943** | **258.76** | **-1.1932** | **680.42** | **151.44** | **100.73** |
| Stddev | 66.8 | 3.4497 | .28853 | 4.83 | .8004 | 3.70 | 2.48 | .32 |
| %RSD | 1.2275 | 48.262 | 53.488 | 1.8675 | 67.083 | .54426 | 1.6402 | .31945 |
| #1 | 5361.5 | -7.0737 | -.62019 | 253.34 | -2.0041 | 676.75 | 154.30 | 100.45 |
| #2 | 5469.4 | -10.634 | -.77897 | 260.31 | -.40362 | 684.16 | 149.78 | 101.08 |
| #3 | 5483.5 | -3.7358 | -.21913 | 262.63 | -1.1719 | 680.34 | 150.25 | 100.65 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3290.1** | **33260.** | **476840.** | **4696.9** | **13885.** | **217990.** |
| Stddev | 4.2 | 178. | 3407. | 7.2 | 78. | 2400. |
| %RSD | .12800 | .53518 | .71453 | .15278 | .56158 | 1.1008 |
| #1 | 3287.0 | 33343. | 473040. | 4688.7 | 13950. | 219960. |
| #2 | 3294.9 | 33055. | 479610. | 4702.0 | 13798. | 215320. |
| #3 | 3288.4 | 33381. | 477880. | 4700.0 | 13905. | 218690. |

Sample Name: MF9M34 Acquired: 06/12/2015 12:29:57 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **23844.** | **2.1160** | **14.793** | **333.97** | **1.6675** | **1.4758** | **12061.** | **41.809** |
| Stddev | 76. | 3.2322 | .710 | .93 | .2364 | .0152 | 21. | .362 |
| %RSD | .31953 | 152.75 | 4.7980 | .27973 | 14.179 | 1.0325 | .17071 | .86561 |
| #1 | 23804. | 2.9064 | 15.595 | 334.64 | 1.4482 | 1.4794 | 12044. | 42.096 |
| #2 | 23932. | -1.4381 | 14.247 | 332.90 | 1.9179 | 1.4889 | 12055. | 41.927 |
| #3 | 23796. | 4.8798 | 14.537 | 334.38 | 1.6363 | 1.4591 | 12084. | 41.402 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **35.550** | **94.814** | **36611.** | **186.81** | **2997.7** | **2251.8** | **4.6516** | **21.861** |
| Stddev | .350 | .837 | 127. | 3.59 | 40.2 | 9.9 | .2365 | .313 |
| %RSD | .98494 | .88296 | .34689 | 1.9235 | 1.3401 | .44158 | 5.0836 | 1.4317 |
| #1 | 35.695 | 94.352 | 36480. | 189.74 | 2956.8 | 2253.6 | 4.4702 | 21.737 |
| #2 | 35.150 | 95.781 | 36619. | 187.88 | 2999.1 | 2241.1 | 4.5655 | 22.217 |
| #3 | 35.804 | 94.310 | 36734. | 182.80 | 3037.1 | 2260.8 | 4.9191 | 21.629 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **4052.7** | **-4.1209** | **-.23935** | **125.13** | **-2.0989** | **351.02** | **58.801** | **382.47** |
| Stddev | 8.4 | 1.5139 | .14950 | 7.66 | 1.0840 | 1.14 | .976 | 2.16 |
| %RSD | .20813 | 36.738 | 62.459 | 6.1235 | 51.643 | .32471 | 1.6591 | .56410 |
| #1 | 4055.6 | -5.2953 | -.08237 | 117.44 | -3.3372 | 351.59 | 59.803 | 384.86 |
| #2 | 4059.4 | -4.6550 | -.38003 | 125.18 | -1.3216 | 351.77 | 57.855 | 380.66 |
| #3 | 4043.2 | -2.4123 | -.25565 | 132.76 | -1.6381 | 349.71 | 58.744 | 381.88 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3405.2** | **33747.** | **484900.** | **4688.8** | **13909.** | **218970.** |
| Stddev | 7.8 | 101. | 3266. | 17.9 | 53. | 880. |
| %RSD | .22788 | .29816 | .67346 | .38182 | .38366 | .40184 |
| #1 | 3396.6 | 33855. | 481370. | 4668.4 | 13969. | 219920. |
| #2 | 3407.1 | 33730. | 487810. | 4696.2 | 13892. | 218190. |
| #3 | 3411.8 | 33656. | 485530. | 4701.8 | 13866. | 218790. |

Sample Name: MF9M35 Acquired: 06/12/2015 12:32:46 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **21213.** | **2.1376** | **13.853** | **297.85** | **1.6373** | **1.5408** | **11207.** | **37.677** |
| Stddev | 48. | 1.0408 | 1.362 | .50 | .3750 | .0279 | 36. | .706 |
| %RSD | .22839 | 48.692 | 9.8346 | .16825 | 22.902 | 1.8089 | .32192 | 1.8743 |
| #1 | 21264. | 2.6232 | 12.828 | 298.43 | 1.8017 | 1.5104 | 11221. | 38.485 |
| #2 | 21207. | .94271 | 15.399 | 297.55 | 1.9021 | 1.5651 | 11234. | 37.372 |
| #3 | 21168. | 2.8469 | 13.331 | 297.58 | 1.2082 | 1.5469 | 11166. | 37.176 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **26.140** | **81.974** | **34464.** | **168.79** | **2837.1** | **2077.1** | **4.9830** | **19.837** |
| Stddev | .689 | .854 | 33. | 5.07 | 3.1 | 4.2 | .2154 | .620 |
| %RSD | 2.6370 | 1.0421 | .09699 | 3.0067 | .10963 | .20173 | 4.3225 | 3.1258 |
| #1 | 26.933 | 80.998 | 34500. | 174.65 | 2840.4 | 2080.8 | 5.1792 | 20.503 |
| #2 | 25.685 | 82.588 | 34459. | 165.86 | 2834.2 | 2078.0 | 4.7525 | 19.277 |
| #3 | 25.803 | 82.334 | 34434. | 165.86 | 2836.8 | 2072.6 | 5.0173 | 19.729 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **3723.5** | **-2.0836** | **-.14212** | **104.59** | **1.0760** | **329.36** | **53.948** | **387.99** |
| Stddev | 19.1 | 1.3850 | .72702 | 20.26 | .3953 | 1.86 | .950 | 5.49 |
| %RSD | .51406 | 66.470 | 511.57 | 19.374 | 36.734 | .56337 | 1.7609 | 1.4143 |
| #1 | 3710.0 | -2.9548 | -.38540 | 117.20 | .74858 | 330.17 | 54.031 | 394.32 |
| #2 | 3715.1 | -.48659 | .67535 | 115.36 | .96442 | 327.23 | 52.960 | 384.70 |
| #3 | 3745.4 | -2.8095 | -.71630 | 81.218 | 1.5151 | 330.66 | 54.854 | 384.94 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3433.4** | **33832.** | **488650.** | **4733.2** | **13827.** | **219000.** |
| Stddev | 48.6 | 93. | 2681. | 63.5 | 34. | 2601. |
| %RSD | 1.4159 | .27633 | .54856 | 1.3414 | .24914 | 1.1877 |
| #1 | 3378.3 | 33746. | 487360. | 4662.3 | 13797. | 222000. |
| #2 | 3451.9 | 33931. | 486860. | 4752.2 | 13864. | 217320. |
| #3 | 3470.1 | 33820. | 491730. | 4785.0 | 13820. | 217700. |

Sample Name: MF9M37 Acquired: 06/12/2015 12:35:36 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **19211.** | **2.2598** | **18.438** | **459.17** | **1.4520** | **1.3720** | **23930.** | **39.113** |
| Stddev | 169. | 2.2928 | .853 | 1.48 | .1890 | .0493 | 118. | .375 |
| %RSD | .87761 | 101.46 | 4.6286 | .32266 | 13.016 | 3.5896 | .49116 | .95781 |
| #1 | 19167. | 2.6461 | 19.423 | 459.75 | 1.2397 | 1.3705 | 23885. | 39.447 |
| #2 | 19397. | -.20163 | 17.969 | 460.28 | 1.5141 | 1.4220 | 24064. | 39.185 |
| #3 | 19068. | 4.3350 | 17.922 | 457.49 | 1.6021 | 1.3236 | 23842. | 38.708 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **22.299** | **94.808** | **35315.** | **167.07** | **3466.7** | **2576.5** | **1.1342** | **23.152** |
| Stddev | .540 | 2.150 | 190. | .95 | 12.6 | 12.5 | .1384 | .490 |
| %RSD | 2.4199 | 2.2673 | .53935 | .56956 | .36381 | .48368 | 12.198 | 2.1175 |
| #1 | 22.914 | 92.333 | 35224. | 166.94 | 3481.0 | 2575.5 | 1.0168 | 22.998 |
| #2 | 21.904 | 96.206 | 35533. | 166.19 | 3457.1 | 2589.5 | 1.0991 | 23.701 |
| #3 | 22.080 | 95.886 | 35186. | 168.08 | 3462.1 | 2564.6 | 1.2868 | 22.758 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **3842.4** | **.61881** | **-.33230** | **119.26** | **-.98247** | **360.35** | **52.623** | **431.87** |
| Stddev | 60.3 | 3.9717 | .28645 | 5.09 | 1.2923 | 5.16 | .958 | 1.38 |
| %RSD | 1.5698 | 641.84 | 86.202 | 4.2695 | 131.54 | 1.4315 | 1.8202 | .31864 |
| #1 | 3909.5 | 2.1984 | -.64368 | 123.12 | -1.5042 | 361.26 | 53.348 | 432.59 |
| #2 | 3825.0 | -3.8997 | -.07997 | 121.17 | .48914 | 364.99 | 52.984 | 430.29 |
| #3 | 3792.8 | 3.5578 | -.27326 | 113.49 | -1.9324 | 354.79 | 51.537 | 432.74 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3432.0** | **33967.** | **494170.** | **4743.4** | **13974.** | **221190.** |
| Stddev | 9.1 | 127. | 2930. | 10.3 | 57. | 1864. |
| %RSD | .26533 | .37338 | .59293 | .21785 | .40989 | .84278 |
| #1 | 3428.1 | 34104. | 491810. | 4733.1 | 14022. | 223220. |
| #2 | 3425.5 | 33855. | 493250. | 4743.5 | 13910. | 219550. |
| #3 | 3442.4 | 33940. | 497450. | 4753.7 | 13989. | 220810. |

Sample Name: MF9M38 Acquired: 06/12/2015 12:38:26 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 | Co2286 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **19329.** | **.94677** | **14.512** | **246.63** | **1.0901** | **1.1984** | **16473.** | **27.479** | **23.856** |
| Stddev | 161. | .61820 | 2.759 | 2.44 | .3300 | .0397 | 103. | .228 | .780 |
| %RSD | .83168 | 65.295 | 19.009 | .99087 | 30.270 | 3.3091 | .62700 | .82906 | 3.2682 |
| #1 | 19189. | .24559 | 17.385 | 243.88 | 1.4312 | 1.2422 | 16372. | 27.527 | 23.649 |
| #2 | 19293. | 1.1815 | 11.885 | 247.44 | .77254 | 1.1649 | 16467. | 27.231 | 23.201 |
| #3 | 19504. | 1.4133 | 14.266 | 248.56 | 1.0665 | 1.1883 | 16579. | 27.679 | 24.718 |

| Elem | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **104.45** | **27125.** | **163.75** | **2639.9** | **1188.2** | **.90099** | **18.524** | **2817.4** | **3.7708** |
| Stddev | 1.36 | 76. | 2.86 | 18.0 | 7.1 | .01788 | .175 | 30.4 | 2.8243 |
| %RSD | 1.2982 | .28202 | 1.7486 | .68013 | .59684 | 1.9841 | .94729 | 1.0796 | 74.900 |
| #1 | 103.87 | 27099. | 161.00 | 2631.0 | 1182.2 | .91871 | 18.344 | 2783.1 | 1.3143 |
| #2 | 103.49 | 27065. | 163.52 | 2628.0 | 1186.3 | .90132 | 18.531 | 2827.7 | 6.8567 |
| #3 | 106.00 | 27211. | 166.72 | 2660.5 | 1196.0 | .88296 | 18.695 | 2841.3 | 3.1413 |

| Elem | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **.30643** | **109.98** | **.56411** | **254.89** | **46.622** | **348.73** |
| Stddev | .50835 | 13.42 | 3.1812 | 2.25 | 1.037 | 3.03 |
| %RSD | 165.89 | 12.203 | 563.92 | .88301 | 2.2248 | .86787 |
| #1 | .81520 | 120.82 | 2.1171 | 255.72 | 46.189 | 347.00 |
| #2 | -.20150 | 114.14 | -3.0953 | 256.60 | 45.872 | 346.96 |
| #3 | .30559 | 94.967 | 2.6705 | 252.34 | 47.806 | 352.22 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3386.0** | **33821.** | **489160.** | **4689.0** | **13888.** | **221400.** |
| Stddev | 11.2 | 173. | 3260. | 16.5 | 51. | 1702. |
| %RSD | .33045 | .51273 | .66653 | .35281 | .36390 | .76893 |
| #1 | 3391.2 | 33901. | 491410. | 4701.3 | 13903. | 223370. |
| #2 | 3393.7 | 33940. | 490650. | 4695.5 | 13930. | 220410. |
| #3 | 3373.2 | 33622. | 485420. | 4670.2 | 13832. | 220430. |

Sample Name: MF9M39 Acquired: 06/12/2015 12:41:15 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **29455.** | **3.0983** | **20.493** | **349.46** | **1.4894** | **.71888** | **129290.** |
| Stddev | 160. | 4.7161 | 1.868 | .68 | .1436 | .04062 | 379. |
| %RSD | .54157 | 152.22 | 9.1153 | .19427 | 9.6413 | 5.6504 | .29302 |
| #1 | 29627. | 8.5384 | 19.636 | 350.12 | 1.4042 | .69460 | 128940. |
| #2 | 29311. | .59152 | 22.636 | 348.76 | 1.6552 | .69626 | 129690. |
| #3 | 29429. | .16493 | 19.208 | 349.50 | 1.4087 | .76577 | 129250. |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **43.632** | **38.192** | **151.04** | **49551.** | **127.99** | **18860.** | **2276.4** |
| Stddev | .863 | .443 | .95 | 170. | 2.02 | 37. | 3.2 |
| %RSD | 1.9768 | 1.1590 | .63133 | .34265 | 1.5804 | .19606 | .14231 |
| #1 | 42.765 | 38.581 | 149.94 | 49387. | 128.34 | 18878. | 2278.9 |
| #2 | 43.642 | 37.710 | 151.56 | 49726. | 125.81 | 18884. | 2277.5 |
| #3 | 44.490 | 38.285 | 151.62 | 49538. | 129.81 | 18817. | 2272.7 |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **2.6811** | **72.404** | **4948.5** | **3.6167** | **.00596** | **298.97** | **-1.5791** |
| Stddev | .4545 | .589 | 39.6 | 2.0550 | .49711 | 12.56 | 3.3246 |
| %RSD | 16.951 | .81376 | .80059 | 56.820 | 8341.4 | 4.2015 | 210.54 |
| #1 | 3.1465 | 72.690 | 4989.2 | 2.9385 | -.42685 | 312.68 | -4.4185 |
| #2 | 2.6586 | 71.727 | 4946.2 | 1.9865 | .54890 | 296.21 | 2.0781 |
| #3 | 2.2383 | 72.796 | 4910.0 | 5.9251 | -.10417 | 288.02 | -2.3968 |

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **325.68** | **66.811** | **262.09** |
| Stddev | .90 | .147 | 2.54 |
| %RSD | .27615 | .21945 | .96930 |
| #1 | 326.67 | 66.649 | 259.82 |
| #2 | 325.47 | 66.934 | 261.62 |
| #3 | 324.90 | 66.851 | 264.84 |

Sample Name: MF9M39 Acquired: 06/12/2015 12:41:15 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3139.0** | **33058.** | **469880.** | **4568.0** | **13518.** | **212390.** |
| Stddev | 20.8 | 106. | 4691. | 19.8 | 11. | 689. |
| %RSD | .66355 | .31998 | .99837 | .43397 | .08270 | .32453 |
| | | | | | | |
| #1 | 3128.4 | 32945. | 464600. | 4567.5 | 13530. | 212410. |
| #2 | 3163.0 | 33154. | 471470. | 4588.0 | 13508. | 211690. |
| #3 | 3125.5 | 33075. | 473570. | 4548.4 | 13515. | 213070. |

Sample Name: MF9M40 Acquired: 06/12/2015 12:44:05 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **33944.** | **2.4367** | **21.048** | **508.91** | **2.1877** | **1.8043** | **54553.** | **58.728** |
| Stddev | 229. | 1.8907 | 2.261 | 2.33 | .1184 | .0290 | 313. | .517 |
| %RSD | .67519 | 77.592 | 10.740 | .45692 | 5.4126 | 1.6093 | .57349 | .88092 |
| #1 | 33683. | 1.8532 | 22.174 | 507.12 | 2.2343 | 1.7782 | 54226. | 59.050 |
| #2 | 34111. | 4.5503 | 22.525 | 511.54 | 2.0531 | 1.8356 | 54849. | 59.003 |
| #3 | 34039. | .90654 | 18.446 | 508.06 | 2.2758 | 1.7993 | 54585. | 58.131 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **28.834** | **122.73** | **50656.** | **205.95** | **7398.4** | **2870.5** | **2.5152** | **33.208** |
| Stddev | .351 | 1.25 | 314. | .59 | 30.2 | 14.5 | .3296 | .201 |
| %RSD | 1.2160 | 1.0159 | .62034 | .28716 | .40783 | .50485 | 13.106 | .60433 |
| #1 | 28.929 | 121.60 | 50324. | 205.49 | 7365.1 | 2854.4 | 2.1495 | 33.387 |
| #2 | 29.127 | 122.51 | 50949. | 206.62 | 7423.9 | 2882.6 | 2.7895 | 33.244 |
| #3 | 28.446 | 124.07 | 50695. | 205.75 | 7406.3 | 2874.4 | 2.6064 | 32.991 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **5961.3** | **-2.1777** | **-.26432** | **191.23** | **-1.3165** | **474.76** | **78.553** | **466.85** |
| Stddev | 21.0 | 4.2211 | .37083 | 5.02 | 1.7663 | 1.10 | .547 | 1.04 |
| %RSD | .35196 | 193.84 | 140.30 | 2.6234 | 134.16 | .23195 | .69597 | .22234 |
| #1 | 5939.0 | -2.9967 | -.13353 | 190.65 | .39278 | 473.57 | 79.178 | 465.75 |
| #2 | 5980.7 | 2.3929 | -.68282 | 196.51 | -1.2076 | 474.96 | 78.316 | 467.00 |
| #3 | 5964.3 | -5.9293 | .02339 | 186.53 | -3.1347 | 475.75 | 78.165 | 467.81 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3243.2** | **33546.** | **478610.** | **4623.6** | **13758.** | **212240.** |
| Stddev | 6.2 | 254. | 2238. | 10.7 | 103. | 1703. |
| %RSD | .19078 | .75790 | .46755 | .23079 | .74720 | .80235 |
| #1 | 3236.1 | 33739. | 477100. | 4615.4 | 13848. | 214090. |
| #2 | 3247.2 | 33640. | 481180. | 4619.7 | 13782. | 210740. |
| #3 | 3246.3 | 33258. | 477550. | 4635.6 | 13646. | 211880. |

Sample Name: PBS2 Acquired: 06/12/2015 12:46:54 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **3.2936** | **-.59247** | **-1.5542** | **.12024** | **-.24024** | **.05294** | **114.49** | **.10588** |
| Stddev | 34.119 | .90030 | 4.2064 | .34943 | .34977 | .08247 | 1.34 | .06259 |
| %RSD | 1035.9 | 151.96 | 270.64 | 290.61 | 145.59 | 155.80 | 1.1682 | 59.108 |
| #1 | 32.169 | -.27321 | -1.6581 | .02251 | -.34723 | .07995 | 116.04 | .03526 |
| #2 | -34.356 | -1.6089 | -5.7077 | .50813 | .15052 | .11851 | 113.68 | .12792 |
| #3 | 12.067 | .10469 | 2.7032 | -.16992 | -.52402 | -.03966 | 113.76 | .15447 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **-.20346** | **-.46076** | **13.752** | **.52419** | **48.009** | **.34884** | **-.10218** | **3.5454** |
| Stddev | .49433 | .56407 | 3.471 | 2.2880 | 20.562 | .91789 | .03157 | .1908 |
| %RSD | 242.96 | 122.42 | 25.241 | 436.49 | 42.829 | 263.12 | 30.894 | 5.3818 |
| #1 | .30244 | -.95813 | 11.027 | -.89287 | 30.165 | -.70363 | -.13708 | 3.7212 |
| #2 | -.68534 | .15212 | 17.660 | -.69837 | 43.368 | .76667 | -.07561 | 3.5725 |
| #3 | -.22747 | -.57628 | 12.570 | 3.1638 | 70.495 | .98348 | -.09386 | 3.3425 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **73.892** | **4.3193** | **-.24447** | **20.125** | **.02015** | **.60853** | **-.03682** | **1.3675** |
| Stddev | 18.402 | 3.2072 | .54233 | 8.705 | .76752 | .60062 | .33205 | .4293 |
| %RSD | 24.904 | 74.253 | 221.84 | 43.258 | 3808.5 | 98.700 | 901.77 | 31.394 |
| #1 | 57.064 | 4.4388 | -.81403 | 15.397 | -.12613 | .01447 | -.00851 | 1.7501 |
| #2 | 71.068 | 1.0540 | .26576 | 30.171 | .85028 | 1.2155 | .28017 | 1.4492 |
| #3 | 93.542 | 7.4651 | -.18514 | 14.806 | -.66369 | .59563 | -.38212 | .90322 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3468.2** | **32644.** | **483070.** | **4668.1** | **13631.** | **221180.** |
| Stddev | 5.8 | 152. | 2594. | 1.6 | 82. | 756. |
| %RSD | .16590 | .46496 | .53687 | .03374 | .59921 | .34198 |
| #1 | 3467.5 | 32810. | 482840. | 4667.1 | 13724. | 220460. |
| #2 | 3474.2 | 32513. | 480610. | 4669.9 | 13572. | 221120. |
| #3 | 3462.8 | 32609. | 485780. | 4667.2 | 13596. | 221970. |

Sample Name: LCS2 Acquired: 06/12/2015 12:49:51 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 | Co2286 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **392.29** | **123.06** | **19.213** | **415.99** | **10.177** | **10.685** | **10833.** | **21.296** | **104.89** |
| Stddev | 39.30 | 4.35 | 3.092 | 2.41 | .074 | .136 | 76. | .212 | .75 |
| %RSD | 10.019 | 3.5343 | 16.091 | .57823 | .72672 | 1.2767 | .70178 | .99541 | .71507 |
| #1 | 352.80 | 126.12 | 20.606 | 417.21 | 10.258 | 10.608 | 10850. | 21.404 | 104.04 |
| #2 | 431.40 | 124.97 | 21.363 | 417.54 | 10.159 | 10.606 | 10899. | 21.431 | 105.46 |
| #3 | 392.68 | 118.08 | 15.670 | 413.22 | 10.113 | 10.843 | 10750. | 21.051 | 105.17 |

| Elem | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 | K_7664 | Se1960 |
|---|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **50.685** | **230.62** | **20.063** | **10352.** | **30.556** | **.03147** | **85.574** | **10156.** | **70.984** |
| Stddev | 1.239 | 1.62 | 1.946 | 132. | .662 | .11199 | .142 | 59. | 6.073 |
| %RSD | 2.4445 | .70268 | 9.6988 | 1.2758 | 2.1657 | 355.91 | .16553 | .57818 | 8.5557 |
| #1 | 51.579 | 230.83 | 17.968 | 10459. | 30.500 | -.09718 | 85.635 | 10152. | 64.962 |
| #2 | 51.205 | 232.13 | 21.814 | 10391. | 31.243 | .10721 | 85.675 | 10217. | 70.883 |
| #3 | 49.271 | 228.91 | 20.408 | 10204. | 29.923 | .08436 | 85.412 | 10100. | 77.108 |

| Elem | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **20.537** | **10411.** | **56.760** | **.48896** | **101.70** | **129.46** |
| Stddev | .123 | 69. | 2.283 | .04079 | 1.14 | 1.06 |
| %RSD | .59963 | .66108 | 4.0215 | 8.3419 | 1.1191 | .81507 |
| #1 | 20.404 | 10434. | 57.630 | .45594 | 101.07 | 128.61 |
| #2 | 20.647 | 10465. | 58.480 | .53455 | 103.02 | 130.64 |
| #3 | 20.561 | 10334. | 54.171 | .47638 | 101.03 | 129.13 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3278.7** | **32854.** | **481490.** | **4525.4** | **13376.** | **214170.** |
| Stddev | 2.7 | 124. | 2976. | 5.9 | 58. | 284. |
| %RSD | .08371 | .37691 | .61803 | .12982 | .43530 | .13251 |
| #1 | 3275.5 | 32846. | 484920. | 4525.9 | 13389. | 213890. |
| #2 | 3280.2 | 32734. | 479910. | 4531.0 | 13313. | 214170. |
| #3 | 3280.4 | 32981. | 479630. | 4519.3 | 13427. | 214460. |

Sample Name: MF9M41 Acquired: 06/12/2015 12:52:45 Type: Unk
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep: 3050B
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **30878.** | **-1.6659** | **24.227** | **323.45** | **1.8062** | **.35524** | **8391.9** | **54.528** |
| Stddev | 252. | .9041 | 3.296 | 2.74 | .1431 | .12255 | 35.2 | .368 |
| %RSD | .81562 | 54.273 | 13.605 | .84562 | 7.9202 | 34.497 | .41908 | .67454 |
| #1 | 30728. | -1.1138 | 27.855 | 322.79 | 1.6442 | .46385 | 8401.8 | 54.601 |
| #2 | 31169. | -1.1746 | 23.411 | 326.45 | 1.8590 | .22239 | 8421.0 | 54.854 |
| #3 | 30739. | -2.7093 | 21.416 | 321.10 | 1.9153 | .37948 | 8352.8 | 54.130 |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **36.224** | **141.01** | **67606.** | **85.346** | **2637.4** | **2416.1** | **2.0144** | **25.876** |
| Stddev | .381 | 2.59 | 375. | 2.697 | 48.4 | 12.6 | .2952 | .242 |
| %RSD | 1.0513 | 1.8394 | .55533 | 3.1601 | 1.8333 | .52130 | 14.655 | .93625 |
| #1 | 36.076 | 138.45 | 67730. | 83.819 | 2615.4 | 2414.0 | 1.9893 | 25.638 |
| #2 | 36.657 | 140.96 | 67904. | 83.759 | 2692.8 | 2429.6 | 2.3213 | 26.122 |
| #3 | 35.939 | 143.63 | 67184. | 88.460 | 2604.0 | 2404.7 | 1.7325 | 25.868 |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **4111.1** | **-1.0630** | **-.23343** | **172.99** | **-1.9363** | **431.85** | **87.391** | **137.39** |
| Stddev | 50.2 | 4.1377 | .23839 | 10.19 | 1.0504 | 2.02 | .489 | 1.39 |
| %RSD | 1.2221 | 389.25 | 102.13 | 5.8906 | 54.250 | .46883 | .55918 | 1.0115 |
| #1 | 4053.1 | -4.0225 | .04162 | 182.42 | -1.8257 | 434.07 | 87.892 | 135.80 |
| #2 | 4139.5 | -2.8315 | -.38050 | 162.18 | -3.0376 | 431.36 | 86.916 | 137.95 |
| #3 | 4140.8 | 3.6650 | -.36141 | 174.35 | -.94550 | 430.11 | 87.364 | 138.40 |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3318.8** | **32935.** | **479020.** | **4644.9** | **13560.** | **214690.** |
| Stddev | 1.9 | 199. | 2546. | 10.2 | 61. | 1974. |
| %RSD | .05794 | .60516 | .53145 | .21938 | .45207 | .91957 |
| #1 | 3320.5 | 33158. | 476100. | 4634.2 | 13629. | 216220. |
| #2 | 3316.8 | 32775. | 480790. | 4654.5 | 13512. | 215390. |
| #3 | 3319.2 | 32871. | 480170. | 4645.9 | 13539. | 212460. |

Sample Name: CCV2 Acquired: 06/12/2015 12:55:35 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **245310.** | **25435.** | **10358.** | **25111.** | **10003.** | **9882.0** | **254000.** |
| Stddev | 240. | 101. | 24. | 252. | 26. | 30.6 | 518. |
| %RSD | .09800 | .39883 | .22763 | 1.0038 | .25569 | .31000 | .20397 |
| #1 | 245590. | 25525. | 10383. | 25381. | 10007. | 9898.1 | 254570. |
| #2 | 245130. | 25455. | 10357. | 25071. | 10026. | 9901.3 | 253870. |
| #3 | 245220. | 25326. | 10335. | 24881. | 9975.6 | 9846.7 | 253560. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Cr2055 | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **24634.** | **25756.** | **24694.** | **257750.** | **25060.** | **249960.** | **24117.** |
| Stddev | 60. | 73. | 269. | 603. | 84. | 452. | 39. |
| %RSD | .24426 | .28278 | 1.0891 | .23401 | .33531 | .18069 | .16314 |
| #1 | 24665. | 25775. | 24590. | 258240. | 25044. | 250270. | 24151. |
| #2 | 24673. | 25818. | 24999. | 257930. | 25151. | 250160. | 24127. |
| #3 | 24565. | 25676. | 24492. | 257070. | 24985. | 249440. | 24074. |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

| Elem | Mo2020 | Ni2316 | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 |
|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **9851.1** | **25761.** | **261480.** | **10039.** | **1038.8** | **258970.** | **9687.4** |
| Stddev | 23.6 | 86. | 731. | 12. | 16.0 | 2799. | 29.6 |
| %RSD | .23977 | .33394 | .27945 | .11932 | 1.5431 | 1.0806 | .30601 |
| #1 | 9868.7 | 25761. | 262280. | 10049. | 1037.5 | 261720. | 9686.5 |
| #2 | 9860.4 | 25847. | 261290. | 10043. | 1055.4 | 256130. | 9717.5 |
| #3 | 9824.3 | 25675. | 260860. | 10026. | 1023.4 | 259060. | 9658.2 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | |
| Range | | | | | | | |

Sample Name: CCV2 Acquired: 06/12/2015 12:55:35 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|
| Units | ug/L | ug/L | ug/L |
| Avg | **10106.** | **24993.** | **24547.** |
| Stddev | 13. | 281. | 63. |
| %RSD | .13076 | 1.1241 | .25607 |
| #1 | 10109. | 24731. | 24590. |
| #2 | 10118. | 25290. | 24576. |
| #3 | 10092. | 24958. | 24475. |
| Check ? | Chk Pass | Chk Pass | Chk Pass |
| Value | | | |
| Range | | | |

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **2686.4** | **31876.** | **426810.** | **4074.9** | **12924.** | **187380.** |
| Stddev | 8.5 | 113. | 3667. | 9.3 | 59. | 1255. |
| %RSD | .31688 | .35399 | .85908 | .22807 | .45842 | .66958 |
| #1 | 2686.7 | 31761. | 430450. | 4069.0 | 12862. | 187470. |
| #2 | 2677.8 | 31986. | 423120. | 4070.2 | 12980. | 186090. |
| #3 | 2694.8 | 31881. | 426860. | 4085.6 | 12931. | 188590. |

Sample Name: CCB2 Acquired: 06/12/2015 12:58:28 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Elem | Al3082 | Sb2068 | As1890 | Ba4554 | Be3131 | Cd2144 | Ca3179 | Cr2055 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **-10.749** | **7.5302** | **1.4290** | **3.0751** | **1.0053** | **.43816** | **27.610** | **.75290** |
| Stddev | 14.635 | 2.3053 | 2.3614 | .5334 | .1706 | .12306 | 4.679 | .24802 |
| %RSD | 136.15 | 30.614 | 165.25 | 17.347 | 16.972 | 28.085 | 16.946 | 32.942 |
| #1 | -10.745 | 5.4386 | -1.2227 | 3.6815 | 1.0928 | .57990 | 28.783 | .96966 |
| #2 | 3.8837 | 7.1501 | 3.3049 | 2.8653 | 1.1144 | .37594 | 31.590 | .80661 |
| #3 | -25.386 | 10.002 | 2.2047 | 2.6785 | .80867 | .35864 | 22.456 | .48243 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | Co2286 | Cu3273 | Fe2598 | Pb2203 | Mg2790 | Mn2576 | Mo2020 | Ni2316 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **.95546** | **1.1680** | **37.822** | **.44031** | **14.830** | **2.6527** | **1.8571** | **1.6347** |
| Stddev | .17933 | .8576 | 7.745 | 2.7409 | 22.821 | .2082 | .5018 | .7461 |
| %RSD | 18.769 | 73.422 | 20.477 | 622.51 | 153.89 | 7.8507 | 27.022 | 45.641 |
| #1 | 1.1505 | 2.0079 | 45.310 | 3.4388 | -1.1283 | 2.8293 | 2.4269 | 2.4958 |
| #2 | .91817 | .29380 | 38.311 | -.18157 | 4.6484 | 2.4230 | 1.6635 | 1.2262 |
| #3 | .79771 | 1.2023 | 29.844 | -1.9363 | 40.970 | 2.7057 | 1.4810 | 1.1820 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Elem | K_7664 | Se1960 | Ag3280 | Na5895 | Tl1908 | Ti3349 | V_2924 | Zn2062 |
|---|---|---|---|---|---|---|---|---|
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Avg | **50.674** | **-2.4065** | **-.15825** | **48.101** | **.24611** | **3.4615** | **1.5162** | **.82775** |
| Stddev | 47.842 | 3.8741 | .45582 | 14.744 | .71603 | .8402 | .5130 | .68399 |
| %RSD | 94.411 | 160.98 | 288.03 | 30.652 | 290.94 | 24.272 | 33.830 | 82.632 |
| #1 | 61.420 | -6.8747 | -.55329 | 60.096 | -.55705 | 3.9202 | 1.8282 | 1.0256 |
| #2 | -1.6270 | .01638 | -.26195 | 52.566 | .81769 | 3.9725 | 1.7963 | 1.3910 |
| #3 | 92.229 | -.36129 | .34048 | 31.640 | .47770 | 2.4918 | .92423 | .06665 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

Sample Name: CCB2 Acquired: 06/12/2015 12:58:28 Type: QC
Method: ICP08 ISM01.3 2015(v8) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG#: MF9M21 CASE#: 45299 Prep:
Comment:

| Int. Std. | Sc2273 | Sc3613 | Sc3613-2 | Y_2243 | Y_3710 | Y_3710-2 |
|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **3414.6** | **32125.** | **481280.** | **4583.4** | **13282.** | **215940.** |
| Stddev | 7.5 | 267. | 3533. | 10.0 | 89. | 665. |
| %RSD | .21825 | .83238 | .73407 | .21909 | .67264 | .30782 |
| | | | | | | |
| #1 | 3406.1 | 32120. | 483600. | 4574.0 | 13329. | 215900. |
| #2 | 3418.1 | 31860. | 483020. | 4582.1 | 13179. | 215300. |
| #3 | 3419.7 | 32395. | 477210. | 4594.0 | 13339. | 216630. |

| Run MS215058 Summary | | 9Be | 51V | 52Cr | 59Co | 60Ni | 63Cu | 66Zn | 75As | 82Se | 107Ag | 111Cd | 121Sb | 137Ba | 205Tl | 208Pb | 6Li | 45Sc | 89Y | 103Rh | 159Tb | 209Bi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| S0 | 06/17/2015 14:32:54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| S | 06/17/2015 14:37:16 | 1.0423 | 5.152 | 1.9051 | 0.9654 | 0.9992 | 1.9496 | 1.7213 | 0.7742 | 4.341 | 1.0184 | 0.9406 | 1.8488 | 9.8395 | 0.9405 | 0.9508 | 100.45% | 100.39% | 100.23% | 100.49% | 100.63% | 100.45% |
| S10 | 06/17/2015 14:41:39 | 10.215 | 9.5756 | 9.6008 | 9.5949 | 9.83 | 9.8823 | 10.081 | 9.7345 | 9.7476 | 9.896 | 9.629 | 9.4376 | 9.8519 | 9.3734 | 9.4779 | 102.32% | 102.54% | 101.09% | 101.10% | 102.06% | 101.99% |
| S50 | 06/17/2015 14:46:02 | 51.181 | 48.149 | 48.582 | 48.308 | 50.36 | 49.562 | 50.159 | 48.437 | 49.299 | 49.441 | 48.312 | 47.221 | 49.187 | 47.022 | 47.298 | 103.01% | 102.41% | 100.93% | 101.21% | 102.27% | 102.02% |
| S200 | 06/17/2015 14:50:26 | 207.43 | 197.32 | 198.16 | 199 | 204.31 | 203.28 | 203.5 | 197.06 | 200.15 | 204.45 | 196.78 | 191.34 | 200.71 | 194.08 | 192.47 | 103.71% | 100.82% | 98.12% | 98.51% | 100.03% | 101.37% |
| S500 | 06/17/2015 14:54:49 | 516.72 | 510.17 | 507.58 | 509.24 | 513.06 | 517.64 | 512.29 | 493.26 | 500.02 | 498.28 | 494.87 | 486.12 | 503.1 | 502.95 | 492.86 | 103.71% | 98.98% | 96.14% | 96.80% | 97.87% | 99.63% |
| S2500 | 06/17/2015 14:59:17 | 2519.2 | 2509.1 | 2504 | 2522.8 | 2523.7 | 2525.2 | 2554.3 | 2487.1 | 0.6273 | 0.8377 | 2492.1 | 2497.3 | 2519.7 | 2482.4 | 2484.3 | 98.76% | 91.81% | 88.74% | 89.07% | 92.23% | 93.68% |
| S5000 | 06/17/2015 15:03:40 | 4988.4 | 4994.5 | 4997.4 | 4987.7 | 4986.7 | 4985.5 | 4971.5 | 5007.3 | 0.742 | 0.7447 | 5004.6 | 5003.1 | 4989.8 | 5008.8 | 5008.9 | 98.08% | 91.62% | 87.36% | 87.20% | 89.46% | 90.40% |
| S50000 | 06/17/2015 15:08:03 | 0.8897 | 0.6237 | 0.7003 | 0.9992 | 1.5195 | 1.4505 | 1.2063 | 0.9529 | 0.062 | 0.3544 | 0.669 | 1.7334 | 0.7406 | 1.0155 | 0.8681 | 93.72% | 90.63% | 85.97% | 83.34% | 88.20% | 84.85% |
| S100000 | 06/17/2015 15:12:26 | 0.1809 | -0.1252 | 0.1837 | 0.8012 | 1.807 | 1.2244 | 0.7591 | 0.1781 | -0.5213 | 0.2887 | 0.1336 | 0.5589 | 0.1766 | 0.2108 | 0.2655 | 89.59% | 91.68% | 84.71% | 81.13% | 84.91% | 79.55% |
| ICV1 | 06/17/2015 15:16:50 | 103.82 | 98.233 | 96.476 | 98.852 | 102.33 | 101.74 | 207.06 | 199.26 | 202.53 | 100.94 | 97.532 | 186.23 | 100.54 | 199.01 | 195.1 | 103.36% | 101.59% | 96.03% | 96.44% | 96.19% | 97.58% |
| ICB1 | 06/17/2015 15:21:17 | 0.0778 | 0.1145 | 0.0008 | 0.046 | 0.0144 | 0.2024 | 0.0129 | 0.0844 | -0.0597 | 0.1456 | 0.0574 | 0.5939 | 0.0324 | 0.0907 | 0.0634 | 104.96% | 102.14% | 96.70% | 97.13% | 96.64% | 98.20% |
| ICSA1 | 06/17/2015 15:25:40 | 0.3377 | -2.7293 | 19.379 | 1.3577 | 6.7133 | 7.658 | 11.13 | 0.3343 | -0.241 | 0.0327 | 0.3537 | 1.3824 | 1.511 | 0.0831 | 4.4233 | 86.93% | 89.87% | 88.30% | 85.23% | 93.16% | 85.94% |
| ICSAB1 | 06/17/2015 15:30:04 | 19.822 | 17.058 | 38.573 | 20.147 | 25.239 | 25.487 | 27.404 | 18.684 | 17.626 | 18.824 | 19.405 | 20.814 | 22.535 | 20.715 | 24.701 | 87.34% | 92.03% | 92.00% | 88.59% | 97.66% | 88.53% |
| CCV1 | 06/17/2015 15:34:27 | 2550.4 | 2548 | 2481.3 | 2463.9 | 2483.4 | 2376.3 | 2369.8 | 2468.8 | 257.3 | 266.54 | 2464.3 | 2537.1 | 2581.3 | 2545 | 2540.6 | 93.08% | 96.23% | 93.23% | 90.94% | 95.56% | 89.80% |
| CCB1 | 06/17/2015 15:38:50 | 0.3483 | 0.3299 | 0.2357 | 0.2742 | 0.2677 | 0.6278 | 0.4279 | 0.3847 | -0.0766 | 0.121 | 0.276 | 1.2208 | 0.2744 | 0.4303 | 0.326 | 106.45% | 104.12% | 101.25% | 101.08% | 101.77% | 102.79% |
| PBS1-5x | 06/17/2015 15:43:13 | 0.0766 | 0.0992 | 0.0248 | 0.0459 | 0.0261 | 0.1961 | 0.8157 | 0.1102 | -0.0782 | 0.0329 | 0.0489 | 0.3479 | 0.0508 | 0.0994 | 0.0794 | 110.19% | 107.27% | 102.73% | 102.72% | 102.29% | 103.19% |
| LCS1-5x | 06/17/2015 15:47:37 | 2.0699 | 10.307 | 3.7405 | 1.904 | 2.0018 | 4.1608 | 4.6453 | 1.8548 | 9.0759 | 2.0519 | 1.9076 | 3.7793 | 19.474 | 1.9393 | 1.9133 | 111.07% | 107.12% | 102.27% | 102.30% | 101.81% | 102.63% |
| MF9M21-5x | 06/17/2015 15:52:01 | 1.1842 | 41.473 | 53.413 | 9.3533 | 15.931 | 17.103 | 42.246 | 13.455 | 0.4355 | 0.0715 | 0.1025 | 0.1966 | 94.002 | 0.1568 | 35.557 | 101.61% | 106.32% | 104.40% | 99.15% | 99.11% | 97.70% |
| MF9M22-5x | 06/17/2015 15:56:24 | 0.7394 | 32.727 | 21.367 | 5.8011 | 12.493 | 12.653 | 24.679 | 2.2459 | 0.5145 | 0.0732 | -0.04 | 0.1112 | 96.486 | 0.1734 | 12.13 | 101.01% | 105.31% | 104.71% | 98.59% | 98.78% | 97.69% |
| MF9M23-5x | 06/17/2015 16:00:48 | 0.9086 | 30.856 | 21.329 | 4.0304 | 10.766 | 12.048 | 27.47 | 2.553 | 0.4994 | 0.0497 | -0.0796 | 0.0943 | 76.565 | 0.1589 | 6.6909 | 100.72% | 105.39% | 103.77% | 98.47% | 98.34% | 97.36% |
| MF9M24-5x | 06/17/2015 16:05:11 | 0.8006 | 40.477 | 24.263 | 5.0966 | 14.982 | 12.555 | 31.724 | 3.8837 | 0.3265 | 0.0637 | -0.0487 | 0.0795 | 93.936 | 0.1917 | 10.486 | 100.76% | 105.13% | 103.43% | 97.45% | 97.78% | 96.87% |
| MF9M25-5x | 06/17/2015 16:09:35 | 0.7537 | 31.518 | 19.361 | 4.3871 | 10.535 | 10.659 | 41.13 | 2.5851 | 0.6387 | 0.0498 | 0.0669 | 0.0514 | 103.97 | 0.1471 | 13.862 | 101.23% | 105.19% | 104.04% | 98.17% | 98.23% | 96.95% |
| MF9M26-5X | 06/17/2015 16:13:58 | 1.346 | 64.823 | 42.439 | 9.2657 | 25.963 | 17.428 | 38.832 | 5.2049 | 0.2506 | 0.086 | -0.0875 | 0.0482 | 192.72 | 0.3164 | 16.843 | 100.59% | 106.35% | 102.34% | 95.70% | 96.18% | 94.06% |
| MF9M27-5x | 06/17/2015 16:18:20 | 1.7672 | 59.454 | 45.723 | 13.136 | 27.393 | 16.504 | 38.717 | 5.2501 | 0.549 | 0.069 | -0.0108 | 0.0489 | 197.08 | 0.2936 | 19.816 | 101.58% | 106.24% | 106.84% | 95.65% | 96.17% | 94.30% |
| MF9M27S-5x | 06/17/2015 16:22:43 | 11.566 | 169.34 | 79.751 | 104.59 | 116.7 | 65.251 | 126.95 | 12.992 | 16.798 | 9.7447 | 9.3483 | 1.4556 | 589.98 | 9.7479 | 40.495 | 100.35% | 104.90% | 103.57% | 93.91% | 93.77% | 92.24% |
| MF9M27D-5x | 06/17/2015 16:27:07 | 2.0997 | 79.705 | 53.341 | 14.118 | 30.853 | 20.166 | 48.167 | 7.0429 | 0.7004 | 0.1017 | -0.1028 | 0.0399 | 293.33 | 0.366 | 21.016 | 101.38% | 106.05% | 104.28% | 93.41% | 93.56% | 91.70% |
| MF9M27A-5x | 06/17/2015 16:31:29 | 11.581 | 107.55 | 62.963 | 21.793 | 35.929 | 33.699 | 55.104 | 13.177 | 41.502 | 9.9405 | 9.1391 | 18.216 | 292.95 | 9.6158 | 29.047 | 100.01% | 104.28% | 103.89% | 93.41% | 93.75% | 91.86% |
| MF9M27L-5x | 06/17/2015 16:35:52 | 0.3587 | 12.669 | 9.7788 | 2.8798 | 5.8935 | 3.6271 | 9.2594 | 1.1236 | -0.0783 | 0.0139 | -0.0042 | 0.014 | 40.417 | 0.063 | 3.9932 | 102.26% | 102.48% | 99.53% | 97.36% | 96.98% | 97.30% |
| CCV2 | 06/17/2015 16:40:15 | 2567.7 | 2577.3 | 2481.3 | 2467 | 2477 | 2400.1 | 2352.3 | 2483.5 | 258.47 | 268.39 | 2468.7 | 2553.9 | 2573.3 | 2586.4 | 2568.5 | 93.62% | 94.30% | 88.05% | 85.57% | 88.46% | 84.10% |
| CCB2 | 06/17/2015 16:44:38 | 0.2443 | 0.2277 | 0.1547 | 0.1827 | 0.1555 | 0.5747 | 0.2826 | 0.346 | 0.2215 | 0.0896 | 0.198 | 1.0428 | 0.1916 | 0.3735 | 0.2315 | 105.44% | 102.18% | 96.39% | 96.41% | 96.51% | 97.72% |
| MF9M28-5x | 06/17/2015 16:49:02 | 1.131 | 44.623 | 29.564 | 8.4163 | 17.218 | 13.374 | 44.63 | 3.8625 | 0.6048 | 0.0752 | 0.0065 | 0.3417 | 123.95 | 0.305 | 30.59 | 102.48% | 105.92% | 103.13% | 96.63% | 97.38% | 95.70% |
| MF9M29-5x | 06/17/2015 16:53:25 | 2.036 | 75.413 | 55.728 | 12.438 | 32.292 | 26.748 | 57.423 | 4.9661 | 0.4813 | 0.1011 | -0.1046 | 0.1628 | 228.87 | 0.4246 | 36.054 | 100.98% | 107.09% | 100.95% | 93.61% | 93.16% | 91.50% |
| MF9M30-5x | 06/17/2015 16:57:48 | 2.522 | 90.286 | 64.864 | 18.543 | 37.571 | 20.341 | 54.121 | 8.1372 | 0.3292 | 0.0985 | -0.1466 | 0.1132 | 392.76 | 0.4792 | 13.968 | 101.20% | 107.53% | 105.32% | 93.51% | 93.24% | 91.40% |
| MF9M31-5x | 06/17/2015 17:02:15 | 0.8643 | 54.873 | 35.717 | 6.5592 | 18.758 | 16.161 | 39.498 | 3.0033 | 0.7644 | 0.0808 | -0.0765 | 0.0949 | 139.81 | 0.2781 | 30.15 | 101.51% | 103.87% | 99.72% | 94.16% | 94.53% | 93.36% |
| MF9M32-5x | 06/17/2015 17:06:41 | 1.5183 | 55.344 | 36.243 | 15.304 | 21.851 | 21.07 | 45.982 | 3.9316 | 0.9664 | 0.1091 | 0.0468 | 0.087 | 216.12 | 0.289 | 39.631 | 101.76% | 104.28% | 103.84% | 93.80% | 94.45% | 92.69% |
| MF9M33-5x | 06/17/2015 17:11:04 | 0.795 | 32.967 | 21.74 | 6.3576 | 13.823 | 9.8739 | 23.97 | 2.7364 | 0.3763 | 0.0506 | -0.0065 | 0.0618 | 99.898 | 0.1674 | 14.881 | 102.82% | 103.50% | 100.94% | 95.35% | 96.08% | 95.26% |
| MF9M34-5x | 06/17/2015 17:15:26 | 0.3641 | 15.332 | 10.759 | 5.6627 | 6.0041 | 20.693 | 74.265 | 1.9808 | 0.5574 | 0.0404 | 0.264 | 0.0757 | 65.367 | 0.0919 | 31.296 | 103.71% | 102.72% | 98.27% | 95.27% | 95.25% | 95.15% |
| MF9M35-5x | 06/17/2015 17:19:49 | 0.4136 | 17.219 | 12.081 | 7.1957 | 6.9668 | 20.994 | 87.116 | 2.2193 | 0.1276 | 0.0405 | 0.2695 | 0.07 | 69.179 | 0.1057 | 35.439 | 103.72% | 102.57% | 97.44% | 94.87% | 94.63% | 94.91% |
| MF9M37-5x | 06/17/2015 17:24:12 | 0.3202 | 14.94 | 10.836 | 4.3453 | 6.2633 | 21.164 | 108.92 | 2.5218 | 0.0535 | 0.0348 | 0.4487 | 0.0667 | 92.696 | 0.0924 | 29.191 | 103.17% | 101.31% | 97.21% | 94.64% | 95.26% | 95.03% |
| MF9M38-5x | 06/17/2015 17:28:38 | 0.3104 | 15.887 | 9.9435 | 5.5268 | 5.9359 | 29.587 | 73.35 | 2.3287 | -0.0553 | 0.0292 | 0.1729 | 0.0708 | 57.991 | 0.1003 | 30.018 | 102.90% | 101.63% | 96.65% | 94.24% | 94.49% | 94.74% |
| MF9M39-5x | 06/17/2015 17:33:00 | 0.3182 | 17.151 | 9.7917 | 5.0194 | 5.4354 | 30.327 | 35.061 | 2.5817 | -0.0452 | 0.0274 | 0.079 | 0.0749 | 55.672 | 0.0909 | 14.886 | 103.02% | 101.36% | 96.39% | 94.14% | 94.60% | 94.40% |
| MF9M40-5x | 06/17/2015 17:37:24 | 0.5041 | 22.473 | 15.599 | 5.9476 | 9.2649 | 29.226 | 74.432 | 4.1949 | 0.4963 | 0.0715 | 0.3301 | 0.1757 | 102.09 | 0.1348 | 30.449 | 102.97% | 100.85% | 97.04% | 92.90% | 93.70% | 93.56% |
| MF9M41-5x | 06/17/2015 17:41:47 | 0.4338 | 23.48 | 15.507 | 6.5949 | 7.8886 | 35.113 | 25.162 | 3.2114 | 0.3081 | 0.0388 | 0.0627 | 0.0787 | 76.019 | 0.1392 | 14.793 | 104.72% | 103.09% | 97.68% | 93.59% | 94.39% | 94.32% |
| CCV3 | 06/17/2015 17:46:44 | 2583.6 | 2588.7 | 2488.4 | 2466.7 | 2469.6 | 2401.1 | 2362 | 2495.6 | 259.55 | 269.74 | 2475.8 | 2586.2 | 2572 | 2603.2 | 2597.3 | 94.16% | 92.36% | 84.97% | 82.56% | 85.75% | 82.15% |
| CCB3 | 06/17/2015 17:51:09 | 0.3976 | 0.3634 | 0.2767 | 0.3047 | 0.3087 | 0.6349 | 0.2862 | 0.4286 | -0.1248 | 0.0968 | 0.3222 | 1.1984 | 0.3077 | 0.4688 | 0.3531 | 105.58% | 100.26% | 93.43% | 94.06% | 94.41% | 96.44% |
| PBS1-5x | 06/17/2015 17:55:34 | 0.0979 | 0.1141 | 0.028 | 0.0748 | 0.0556 | 0.2147 | 0.0229 | 0.1693 | 0.0711 | 0.0159 | 0.079 | 0.3575 | 0.0738 | 0.111 | 0.0986 | 110.35% | 103.45% | 96.52% | 96.58% | 96.21% | 98.15% |
| LCS1-5x | 06/17/2015 17:59:59 | 2.0488 | 10.143 | 3.711 | 1.9168 | 1.9511 | 3.9745 | 3.8806 | 2.0057 | 9.5001 | 2.0163 | 1.924 | 3.8171 | 19.159 | 1.9089 | 1.9139 | 112.42% | 105.47% | 98.15% | 98.29% | 97.23% | 99.02% |
| MF9M15-5x | 06/17/2015 18:04:23 | 0.7183 | 30.173 | 20.636 | 5.3346 | 11.724 | 10.266 | 41.964 | 2.3594 | 0.4762 | 0.0603 | 0.0144 | 0.1406 | 96.133 | 0.1906 | 42.721 | 104.69% | 103.40% | 100.39% | 95.14% | 96.63% | 96.69% |
| MF9M15S-5x | 06/17/2015 18:08:46 | 10.595 | 130.28 | 56.775 | 96.41 | 106.17 | 57.174 | 136.4 | 9.7592 | 17.823 | 9.7823 | 9.4462 | 2.6213 | 484.67 | 9.378 | 45.66 | 103.95% | 103.42% | 100.11% | 94.49% | 96.26% | 95.82% |
| MF9M15D-5x | 06/17/2015 18:13:08 | 0.7632 | 31.602 | 21.315 | 5.3853 | 11.706 | 10.089 | 40.694 | 2.6253 | 0.4986 | 0.0611 | 0.0591 | 0.1009 | 99.314 | 0.1864 | 43.968 | 103.38% | 103.82% | 98.79% | 93.91% | 94.24% | 94.23% |
| MF9M15L-5x | 06/17/2015 18:17:30 | 0.1642 | 6.4193 | 4.3049 | 1.1218 | 2.4536 | 2.1986 | 9.1359 | 0.5684 | 0.3217 | 0.0127 | 0.0046 | 0.0482 | 19.596 | 0.0426 | 8.5667 | 103.84% | 101.17% | 94.76% | 94.77% | 93.33% | 94.63% |
| MF9M15A-5x | 06/17/2015 18:21:53 | 10.507 | 79.568 | 38.534 | 14.211 | 21 | 28.364 | 58.964 | 10.855 | 44.041 | 9.9622 | 9.3784 | 18.044 | 191.09 | 9.4933 | 52.087 | 100.56% | 100.52% | 96.01% | 91.48% | 92.16% | 90.85% |
| MF9M20-5x | 06/17/2015 18:26:17 | 0.7628 | 32.415 | 23.339 | 6.4186 | 13.554 | 16.517 | 51.035 | 3.3634 | 1.0204 | 0.0698 | 0.0938 | 0.0825 | 121.64 | 0.1691 | 67.092 | 100.93% | 100.75% | 97.71% | 91.46% | 93.16% | 92.52% |
| MF9M69-5x | 06/17/2015 18:30:40 | 0.577 | 22.125 | 16.515 | 3.2292 | 7.9727 | 10.098 | 40.209 | 2.8713 | 0.6178 | 0.0497 | 0.1635 | 0.0831 | 86.498 | 0.1118 | 59.008 | 101.94% | 100.03% | 96.95% | 92.36% | 93.59% | 93.99% |
| MF9M70-5x | 06/17/2015 18:35:03 | 0.7922 | 33.143 | 25.326 | 4.1285 | 10.528 | 10.019 | 21.698 | 3.5376 | 0.7586 | 0.0493 | 0.0947 | 0.1476 | 110.98 | 0.1615 | 103.02 | 102.00% | 100.75% | 99.17% | 92.91% | 94.37% | 94.65% |
| MF9M71-5x | 06/17/2015 18:39:26 | 1.0977 | 44.56 | 30.495 | 8.3776 | 13.881 | 10.701 | 21.675 | 4.0385 | 0.4899 | 0.0584 | -0.0228 | 0.0908 | 129.9 | 0.2079 | 33.406 | 102.34% | 102.09% | 99.86% | 93.01% | 94.78% | 94.35% |
| MF9M72-5x | 06/17/2015 18:43:49 | 0.5423 | 24.654 | 18.734 | 3.4414 | 7.9928 | 7.3005 | 48.621 | 3.5842 | 0.4048 | 0.0364 | 0.1145 | 0.0808 | 71.619 | 0.1019 | 21.787 | 103.04% | 100.79% | 97.72% | 93.72% | 94.83% | 94.99% |
| MF9M73-5x | 06/17/2015 18:48:13 | 0.5438 | 24.869 | 18.062 | 2.4817 | 7.9474 | 5.4379 | 14.488 | 2.5917 | 0.0862 | 0.0254 | -0.0202 | 0.0547 | 59.987 | 0.1095 | 6.9022 | 104.59% | 101.37% | 97.76% | 94.08% | 94.40% | 94.90% |
| MF9M74-5x | 06/17/2015 18:52:37 | 0.9021 | 35.334 | 27.385 | 4.4049 | 13.655 | 7.5598 | 15.261 | 3.6559 | 0.5272 | 0.0385 | -0.0278 | 0.0424 | 86.553 | 0.1671 | 6.8514 | 104.34% | 102.31% | 97.95% | 92.60% | 92.63% | 93.21% |
| MF9M75-5x | 06/17/2015 18:57:00 | 0.4929 | 24.138 | 14.583 | 4.2713 | 6.8831 | 5.0545 | 42.521 | 2.7498 | 0.3263 | 0.0402 | 0.1497 | 0.0687 | 73.748 | 0.1327 | 22.176 | 104.54% | 101.06% | 96.28% | 93.01% | 92.34% | 93.13% |
| MF9M76-5x | 06/17/2015 19:01:25 | 0.352 | 18.56 | 11.455 | 2.8189 | 5.1144 | 3.8965 | 32.325 | 2.089 | 0.3517 | 0.0259 | 0.1171 | 0.0758 | 78.359 | 0.1093 | 17.943 | 104.83% | 101.19% | 96.17% | 93.18% | 93.46% | 94.12% |
| MF9M77-5x | 06/17/2015 19:05:48 | 0.3795 | 18.422 | 11.504 | 2.7377 | 6.2879 | 4.1717 | 29.746 | 1.8277 | 0.0919 | 0.0242 | 0.1248 | 0.0644 | 53.852 | 0.1144 | 14.471 | 105.11% | 100.70% | 97.17% | 94.24% | 94.65% | 95.43% |
| MF9M78-5x | 06/17/2015 19:10:11 | 0.7824 | 38.823 | 23.644 | 4.1872 | 11.207 | 5.8659 | 35.169 | 3.3522 | 0.7979 | 0.0482 | 0.0312 | 0.0734 | 100.51 | 0.2168 | 13.258 | 104.33% | 101.69% | 98.20% | 93.24% | 94.61% | 94.59% |
| MF9M79-5x | 06/17/2015 19:14:34 | 0.5709 | 30.38 | 17.748 | 3.5253 | 8.3849 | 4.4565 | 34.866 | 3.142 | 0.6546 | 0.0353 | 0.0363 | 0.0665 | 66.719 | 0.1621 | 14.028 | 104.67% | 101.58% | 97.23% | 93.85% | 94.85% | 95.22% |
| MF9M15A-5x | 06/17/2015 19:18:57 | 0.7343 | 29.344 | 19.848 | 5.19 | 11.255 | 10.022 | 40.278 | 2.2992 | 0.6137 | 0.1231 | 0.1135 | 0.1882 | 93.012 | 0.2244 | 40.932 | 104.65% | 101.53% | 98.51% | 93.47% | 95.24% | 95.05% |
| ZZZZZZ | 06/17/2015 19:23:20 | -0.0013 | -0.5783 | 0.9291 | 0.0145 | 4.6405 | -0.0427 | -0.0088 | -0.0481 | 0.0871 | 0.0018 | -0.0152 | 0.0303 | 0.0826 | 0.0199 | 0.0279 | 101.95% | 91.97% | 91.25% | 92.43% | 95.88% | 96.44% |
| CCV4 | 06/17/2015 19:27:43 | 2554.4 | 2560.3 | 2469.8 | 2456.4 | 2439.1 | 2393.4 | 2329.8 | 2442.5 | 254.38 | 264.58 | 2411.4 | 2536.5 | 2496.6 | 2572.4 | 2562.7 | 94.33% | 89.85% | 83.68% | 81.19% | 84.89% | 81.20% |
| CCB4 | 06/17/2015 19:32:09 | 0.2667 | 0.2592 | 0.1712 | 0.2 | 0.229 | 0.5004 | 0.2314 | 0.293 | -0.2223 | 0.0933 | 0.2215 | 1.1253 | 0.2253 | 0.4006 | 0.262 | 104.36% | 96.74% | 91.11% | 91.75% | 92.16% | 94.42% |

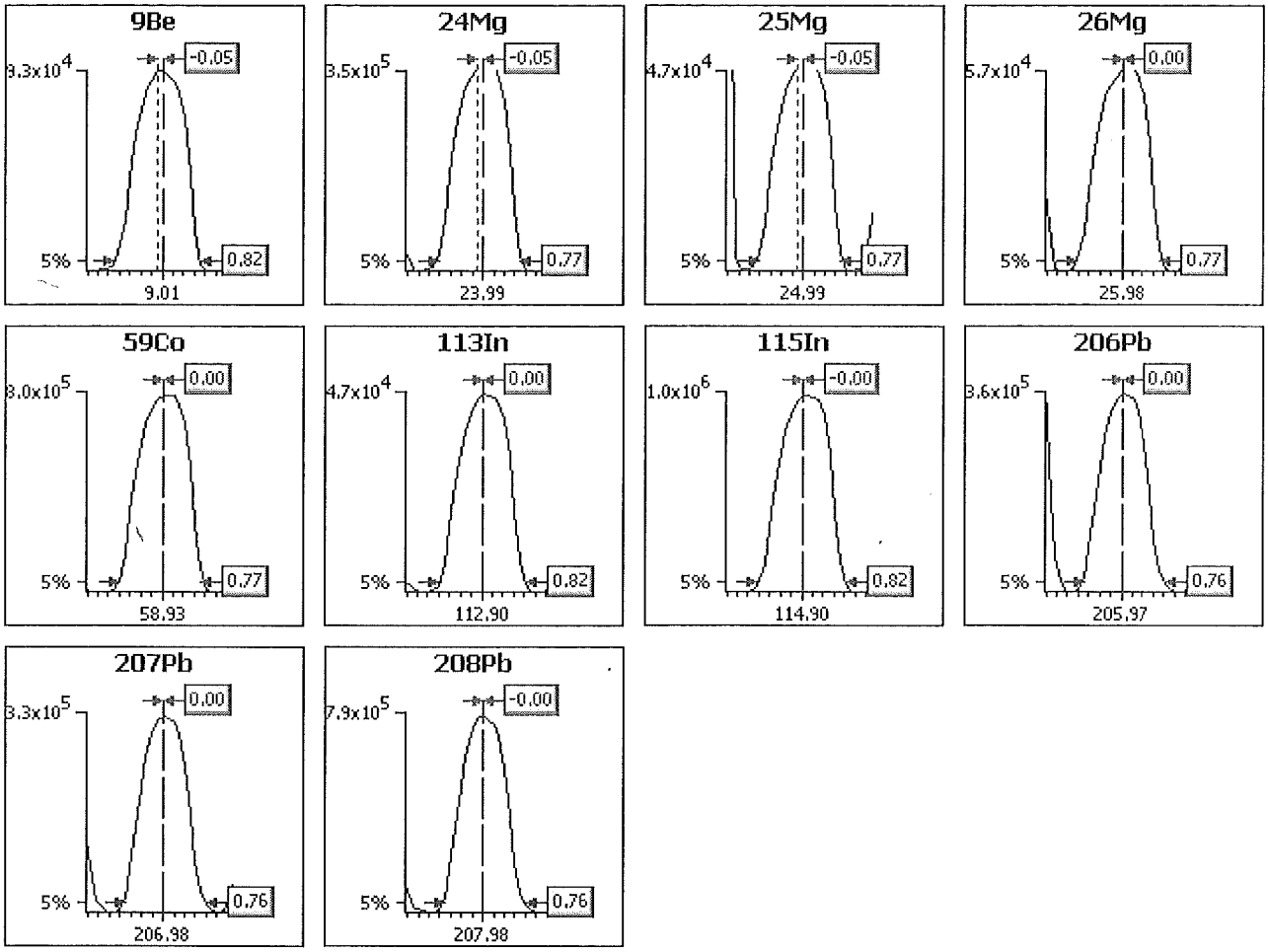
## Performance Report

Tune - Run MS215058

**Sample details**
Acquired at : 06/17/2015 14:02:08
Report name : CLP [10/19/2012 10:16:28]

**Mass Calibration verification**

**Acquisition parameters**
Sweeps : 10
Dwell : 5.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum




| Analyte | Limits | | | Results | |
|---|---|---|---|---|---|
| | Max. width | Min. width | Max. error | Peak width | Peak error |
| **9Be** | 0.85 | 0.65 | 0.11 | 0.82 | -0.05 |
| **24Mg** | 0.85 | 0.65 | 0.11 | 0.77 | -0.05 |
| **25Mg** | 0.85 | 0.65 | 0.11 | 0.77 | -0.05 |
| **26Mg** | 0.85 | 0.65 | 0.11 | 0.77 | 0.00 |
| **59Co** | 0.85 | 0.65 | 0.11 | 0.77 | 0.00 |
| **113In** | 0.85 | 0.65 | 0.11 | 0.82 | 0.00 |
| **115In** | 0.85 | 0.65 | 0.11 | 0.82 | -0.00 |
| **206Pb** | 0.85 | 0.65 | 0.11 | 0.76 | 0.00 |
| **207Pb** | 0.85 | 0.65 | 0.11 | 0.76 | 0.00 |
| **208Pb** | 0.85 | 0.65 | 0.11 | 0.76 | -0.00 |

**Sample details**
Acquired at : 06/17/2015 14:02:08
Report name : CLP [10/19/2012 10:16:28]

Tune - Run MS215058

## Tune conditions

| Major | |
|---|---|
| Extraction | -149 |
| Lens 1 | 4.7 |
| Focus | 24.9 |
| D1 | -32.9 |
| Pole Bias | -0.0 |
| Hexapole Bias | -5.0 |
| Nebuliser | 0.80 |
| Sampling Depth | 150 |

| Minor | |
|---|---|
| Lens 2 | -27.5 |
| Lens 3 | -115.3 |
| Forward power | 1404 |
| Horizontal | 85 |
| Vertical | 467 |
| D2 | -160 |
| DA | -80.0 |
| Cool | 13.0 |
| Auxiliary | 0.90 |

| Global | |
|---|---|
| Standard resolution | 125 |
| High resolution | 125 |
| Analogue Detector | 1922 |
| PC Detector | 3069 |

Add. Gases

## Sensitivity and stability results

### Acquisition parameters
Sweeps : 130

| Run | Time | 5Bkg | 9Be | 24Mg | 25Mg | 26Mg | 56Ar O | 59Co | 138Ba++ | 101Bkg |
|---|---|---|---|---|---|---|---|---|---|---|
| Dwell (mSecs) | | 100.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 30.0 | 100.0 |
| Limits | %RSD | - | 5.0% | 5.0% | 5.0% | 5.0% | - | 5.0% | - | - |
| | Countrate | - | >3000 | >10000 | >10000 | >10000 | - | >10000 | - | - |
| 1 | 14:02:29 | 2.154 | 94897.270 | 391831.07 | 48873.668 | 57106.540 | 350046.09 | 785565.51 | 35881.184 | 1.462 |
| 2 | 14:03:41 | 2.000 | 94503.604 | 388792.04 | 48442.701 | 57164.628 | 347519.73 | 785257.66 | 35804.702 | 1.923 |
| 3 | 14:04:53 | 1.769 | 94892.602 | 390441.94 | 48192.797 | 56949.315 | 342268.18 | 784796.32 | 35865.733 | 1.462 |
| 4 | 14:06:06 | 1.769 | 94822.581 | 390733.61 | 48605.956 | 57539.503 | 343872.23 | 786495.89 | 35902.300 | 1.538 |
| 5 | 14:07:19 | 1.769 | 95507.257 | 393090.67 | 48658.569 | 57695.963 | 341086.57 | 786764.14 | 35837.149 | 1.923 |
| x | | 1.892 | 94924.663 | 390977.86 | 48554.738 | 57291.190 | 344958.56 | 785775.90 | 35858.214 | 1.662 |
| σ | | 0.18 | 363.63 | 1605.97 | 254.30 | 313.25 | 3736.75 | 831.78 | 38.19 | 0.24 |
| %RSD | | 9.358 | 0.383 | 0.411 | 0.524 | 0.547 | 1.083 | 0.106 | 0.107 | 14.493 |

| Run | Time | 113In | 115In | 138Ba | 140Ce | 156Ce O | 206Pb | 207Pb | 208Pb | 220Bkg |
|---|---|---|---|---|---|---|---|---|---|---|
| Dwell (mSecs) | | 10.0 | 10.0 | 10.0 | 10.0 | 30.0 | 10.0 | 10.0 | 10.0 | 100.0 |
| Limits | %RSD | 5.0% | 5.0% | - | - | - | 5.0% | 5.0% | 5.0% | - |
| | Countrate | >10000 | >10000 | - | - | - | >10000 | >10000 | >10000 | <20 |
| 1 | 14:02:29 | 46784.808 | 1043594.9 | 743898.26 | 1089199.5 | 18062.888 | 365210.35 | 330249.83 | 793694.28 | 2.231 |
| 2 | 14:03:41 | 46873.767 | 1045890.0 | 742028.21 | 1091337.8 | 17923.614 | 363452.08 | 328859.51 | 794970.87 | 1.846 |
| 3 | 14:04:53 | 46882.276 | 1044111.7 | 743596.91 | 1086602.5 | 18285.424 | 363729.97 | 328830.71 | 794135.83 | 2.308 |
| 4 | 14:06:06 | 46698.170 | 1043836.3 | 741899.81 | 1084487.9 | 18007.384 | 363860.09 | 328314.00 | 795594.87 | 1.846 |
| 5 | 14:07:19 | 46178.362 | 1035710.0 | 734502.55 | 1078362.7 | 17932.607 | 357991.63 | 324082.33 | 779197.23 | 2.231 |
| x | | 46683.477 | 1042628.6 | 741185.15 | 1085998.1 | 18042.383 | 362848.82 | 328067.28 | 791518.62 | 2.092 |
| σ | | 292.13 | 3971.65 | 3842.40 | 4992.66 | 147.37 | 2798.75 | 2340.65 | 6927.01 | 0.23 |
| %RSD | | 0.626 | 0.381 | 0.518 | 0.460 | 0.817 | 0.771 | 0.713 | 0.875 | 10.844 |

## Ratio results

| Run | Time | 56Ar O/59Co | 138Ba++/138Ba | 115In/101Bkg | 156Ce O/140Ce |
|---|---|---|---|---|---|
| Ratio limits | | - | - | >10000.0000 | <0.0300 |
| 1 | 14:02:29 | 0.446 | 0.048 | 714038.53 | 0.017 |
| 2 | 14:03:41 | 0.443 | 0.048 | 543862.71 | 0.016 |
| 3 | 14:04:53 | 0.436 | 0.048 | 714392.15 | 0.017 |
| 4 | 14;06:06 | 0.437 | 0.048 | 678493.56 | 0.017 |
| 5 | 14:07:19 | 0.434 | 0.049 | 538569.11 | 0.017 |
| x | | 0.4390 | 0.0484 | 637871.21 | 0.0166 |
| σ | | 0.00 | 0.00 | 89450.54 | 0.00 |
| %RSD | | 1.1247 | 0.4939 | 14.0233 | 0.8689 |

Result : The performance report passed.

## Experiment Details

John Kershisnik
Run # MS215058
MF9M21
Case: 45299
W.O. 1515559
ISM01.3 Soil

| | |
|---|---|
| **Description** | PlasmaLab Template BlankExperiment |
| **Template Filename** | C:\Program Files\Thermo Fisher\PlasmaLab\data\MS215057.tee |
| **Created By User** | Edwards |
| **Analyte Database** | ILM5.3.tea |
| **Creation Timestamp** | 02/02/2005 10:10:19 |
| **Last Edited By** | john.kershisnik |
| **Last Edit Timestamp** | 06/21/2015 21:01:11 |
| **Instrument Detector** | Simultaneous |
| **Database Version** | 3.51 |
| **Acquisition Mode** | Unknown |

**Numerical Results report key (text indicates meaning)**

Blue text indicates that cell is a statistic.
Underlining indicates that a data warning flag is set.

| Column headings | Result cells | Data warning flags |
|---|---|---|
| No flag | Internal Standard | I - Invalid calibration |
| Semi Quant | Excluded | T - Tripped |
| Standard Addition | QC Warning | F - Interference correction failed |
| Multi Element | QC Failure | M - Result over max |
| | Transient TRA only: | V - Valley integration failed |
| | Peak Not Found | D - Different method used |
| | Manually Edited | |
| | Merged Peak | |

## Setup

### Survey Scan Setup

| | |
|---|---|
| **Sweeps** | 5 |
| **Dwell Time** | 600 |
| **Channels Per Mass** | 10 |
| **Acquisition Duration** | 6739 |

### Main Run Setup

| | |
|---|---|
| **Main Run** | Peak Jumping |
| **Sweeps** | 40 |
| **Dwell Time** | 10000 |
| **Channels Per Mass** | 1 |
| **Acquisition Duration** | 36287 |
| **Channel Spacing** | 0.02 |

### Survey Scan Regions

| Start AMU | End AMU | Channels | Dwell ms | Resolution |
|---|---|---|---|---|
| 4.59 | 11.50 | 69 | 600 | Standard |
| 12.50 | 13.50 | 10 | 600 | |
| 22.59 | 28.41 | 58 | 600 | |
| 30.59 | 31.50 | 9 | 600 | |
| 33.50 | 34.50 | 10 | 600 | |
| 36.50 | 37.50 | 10 | 600 | |
| 38.50 | 39.41 | 9 | 600 | Standard |
| 42.59 | 245.50 | 2029 | 600 | Standard |

### Peak Jump Regions

| Analyte | Channels | Dwell ms | Resolution |
|---|---|---|---|
| 6Li | 1 | 30000 | Standard |
| 7Li | 1 | 10000 | Standard |
| 9Be | 1 | 30000 | Standard |
| 13C | 1 | 10000 | |
| 23Na | 1 | 10000 | |
| 24Mg | 1 | 5000 | |
| 25Mg | 1 | 5000 | |
| 26Mg | 1 | 5000 | |
| 27Al | 1 | 10000 | Standard |
| 39K | 1 | 10000 | |
| 43Ca | 1 | 10000 | |
| 44Ca | 1 | 10000 | |
| 45Sc | 1 | 20000 | Standard |
| 47Ti | 1 | 10000 | Standard |
| 51V | 1 | 10000 | Standard |
| 52Cr | 1 | 10000 | Standard |
| 53Cl O | 1 | 10000 | Standard |
| 54Fe | 1 | 10000 | |
| 55Mn | 1 | 10000 | Standard |
| 56Fe | 1 | 10000 | |

| | | | |
|---|---|---|---|
| 57Fe | 1 | 10000 | |
| 59Co | 1 | 10000 | Standard |
| 60Ni | 1 | 10000 | Standard |
| 63Cu | 1 | 10000 | Standard |
| 65Cu | 1 | 10000 | Standard |
| 66Zn | 1 | 10000 | Standard |
| 75As | 1 | 30000 | Standard |
| 77Ar Cl | 1 | 30000 | Standard |
| 78Se | 1 | 30000 | Standard |
| 82Se | 1 | 30000 | Standard |
| 83Kr | 1 | 30000 | Standard |
| 86Sr | 1 | 10000 | Standard |
| 88Sr | 1 | 10000 | Standard |
| 89Y | 1 | 10000 | Standard |
| 94Mo | 1 | 10000 | Standard |
| 95Mo | 1 | 10000 | Standard |
| 96Mo | 1 | 10000 | Standard |
| 97Mo | 1 | 10000 | Standard |
| 98Mo | 1 | 10000 | Standard |
| 103Rh | 1 | 10000 | Standard |
| 106Pd | 1 | 10000 | Standard |
| 106Cd | 1 | 10000 | Standard |
| 107Ag | 1 | 20000 | Standard |
| 108Mo O | 1 | 10000 | Standard |
| 109Ag | 1 | 20000 | Standard |
| 111Cd | 1 | 20000 | Standard |
| 114Cd | 1 | 10000 | Standard |
| 115In | 1 | 10000 | Standard |
| 118Sn | 1 | 10000 | Standard |
| 121Sb | 1 | 10000 | Standard |
| 135Ba | 1 | 10000 | Standard |
| 137Ba | 1 | 10000 | Standard |
| 159Tb | 1 | 10000 | Standard |
| 203Tl | 1 | 20000 | Standard |
| 205Tl | 1 | 20000 | Standard |
| 206Pb | 1 | 10000 | Standard |
| 207Pb | 1 | 10000 | Standard |
| 208Pb | 1 | 10000 | Standard |
| 209Bi | 1 | 20000 | Standard |
| 220Bkg | 1 | 10000 | Standard |

## Calibration Technique

**Use External Drift Correction -** No
**Calibrate by -** Element

| Symbol | Interference Correction | RSF | Calibration Method | Line Fit | Weighting | Forcing | Use for Semi-Quant | Max Error | Minimum Correlation |
|---|---|---|---|---|---|---|---|---|---|
| 6Li | Yes | 1.00 | None | | | | No | | |
| 7Li | Yes | 1.00 | None | | | | No | | |
| 9Be | Yes | 0.75 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 13C | Yes | 0.05 | None | | | | No | | |
| 23Na | Yes | 1.00 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 24Mg | Yes | 0.98 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 25Mg | Yes | 0.98 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 26Mg | Yes | 0.98 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 27Al | Yes | 0.98 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 39K | Yes | 1.00 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 43Ca | Yes | 0.99 | None | | | | No | | |
| 44Ca | Yes | 0.99 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 45Sc | Yes | 1.00 | None | | | | No | | |
| 47Ti | Yes | 0.99 | Semi-Quantified | | | | No | | |
| 51V | Yes | 0.99 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 52Cr | Yes | 0.98 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 55Mn | Yes | 0.95 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 54Fe | Yes | 0.96 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 56Fe | Yes | 0.96 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 57Fe | Yes | 0.96 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 59Co | Yes | 0.93 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 60Ni | No | 0.91 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 63Cu | Yes | 0.90 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 65Cu | Yes | 0.90 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 66Zn | Yes | 0.38 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 75As | Yes | 0.07 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 78Se | Yes | 0.10 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 82Se | Yes | 0.10 | Fully-Quantified | Linear | None | Through Blank | Yes | | 0.995000 |
| 83Kr | Yes | 0.01 | Semi-Quantified | | | | No | | |
| 86Sr | Yes | 0.96 | None | | | | No | | |
| 88Sr | Yes | 0.96 | None | | | | No | | |
| 89Y | Yes | 0.98 | None | | | | No | | |
| 94Mo | Yes | 0.98 | None | | | | No | | |
| 95Mo | Yes | 0.98 | None | | | | No | | |
| 96Mo | Yes | 0.98 | None | | | | No | | |
| 97Mo | Yes | 0.98 | None | | | | No | | |
| 98Mo | Yes | 0.98 | None | | | | No | | |

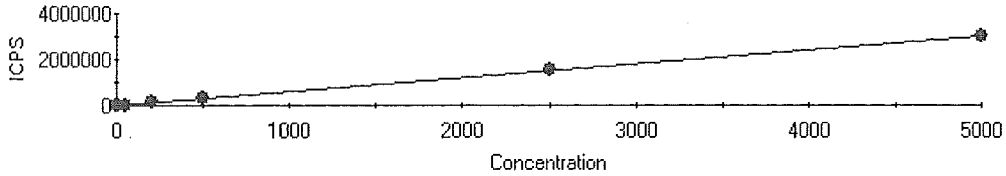
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 103Rh | Yes | 0.94 | None | | | | No | |
| 106Pd | Yes | 0.93 | None | | | | No | |
| 107Ag | Yes | 0.93 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 109Ag | Yes | 0.93 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 106Cd | Yes | 0.57 | None | | | | No | |
| 111Cd | Yes | 0.57 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 114Cd | Yes | 0.57 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 115In | Yes | 0.99 | None | | | | No | |
| 118Sn | Yes | 0.96 | None | | | | No | |
| 121Sb | Yes | 0.39 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 135Ba | Yes | 0.91 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 137Ba | Yes | 0.91 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 159Tb | Yes | 0.99 | None | | | | No | |
| 203Tl | Yes | 1.00 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 206Pb | Yes | 0.97 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 207Pb | Yes | 0.97 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 208Pb | Yes | 0.97 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 209Bi | Yes | 0.92 | None | | | | No | |
| 205Tl | Yes | 1.00 | Fully-Quantified | Linear | None | Through Blank | Yes | 0.995000 |
| 220Bkg | Yes | | Semi-Quantified | | | | No | |
| 77Ar Cl | Yes | | Semi-Quantified | | | | No | |
| 53Cl O | Yes | | Semi-Quantified | | | | No | |
| 108Mo O | Yes | | Semi-Quantified | | | | No | |

## Sample List

| No | Label | Type | Weight | Rack | Row | Col | Height |
|---|---|---|---|---|---|---|---|
| 1 | S0 | Blank | 1.000 | 1 | 1 | 1 | 144 |
| 2 | S | Fully Quant Standard | 1.000 | 1 | 1 | 2 | 144 |
| 3 | S10 | Fully Quant Standard | 1.000 | 1 | 1 | 3 | 144 |
| 4 | S50 | Fully Quant Standard | 1.000 | 1 | 1 | 4 | 144 |
| 5 | S200 | Fully Quant Standard | 1.000 | 1 | 1 | 5 | 144 |
| 6 | S500 | Fully Quant Standard | 1.000 | 1 | 1 | 6 | 144 |
| 7 | S2500 | Fully Quant Standard | 1.000 | 1 | 1 | 7 | 144 |
| 8 | S5000 | Fully Quant Standard | 1.000 | 1 | 1 | 8 | 144 |
| 9 | S50000 | Fully Quant Standard | 1.000 | 1 | 1 | 9 | 144 |
| 10 | S100000 | Fully Quant Standard | 1.000 | 1 | 1 | 10 | 144 |
| 11 | ICV1 | Unknown | 1.000 | 1 | 1 | 11 | 144 |
| 12 | ICB1 | Unknown | 1.000 | 1 | 1 | 12 | 144 |
| 13 | ICSA1 | Unknown | 1.000 | 1 | 2 | 1 | 144 |
| 14 | ICSAB1 | Unknown | 1.000 | 1 | 2 | 2 | 144 |
| 15 | CCV1 | Unknown | 1.000 | 1 | 2 | 3 | 144 |
| 16 | CCB1 | Unknown | 1.000 | 1 | 2 | 4 | 144 |
| 17 | PBS1-5x | Unknown | 1.000 | 1 | 2 | 5 | 144 |
| 18 | LCS1-5x | Unknown | 1.000 | 1 | 2 | 6 | 144 |
| 19 | MF9M21-5x | Unknown | 1.000 | 1 | 2 | 7 | 144 |
| 20 | MF9M22-5x | Unknown | 1.000 | 1 | 2 | 8 | 144 |
| 21 | MF9M23-5x | Unknown | 1.000 | 1 | 2 | 9 | 144 |
| 22 | MF9M24-5x | Unknown | 1.000 | 1 | 2 | 10 | 144 |
| 23 | MF9M25-5x | Unknown | 1.000 | 1 | 2 | 11 | 144 |
| 24 | MF9M26-5X | Unknown | 1.000 | 1 | 2 | 12 | 144 |
| 25 | MF9M27-5x | Unknown | 1.000 | 1 | 3 | 1 | 144 |
| 26 | MF9M27S-5x | Unknown | 1.000 | 1 | 3 | 2 | 144 |
| 27 | MF9M27D-5x | Unknown | 1.000 | 1 | 3 | 3 | 144 |
| 28 | MF9M27A-5x | Unknown | 1.000 | 1 | 3 | 4 | 144 |
| 29 | MF9M27L-5x | Unknown | 1.000 | 1 | 3 | 5 | 144 |
| 30 | CCV2 | Unknown | 1.000 | 1 | 3 | 6 | 144 |
| 31 | CCB2 | Unknown | 1.000 | 1 | 3 | 7 | 144 |
| 32 | MF9M28-5x | Unknown | 1.000 | 1 | 3 | 8 | 144 |
| 33 | MF9M29-5x | Unknown | 1.000 | 1 | 3 | 9 | 144 |
| 34 | MF9M30-5x | Unknown | 1.000 | 1 | 3 | 10 | 144 |
| 35 | MF9M31-5x | Unknown | 1.000 | 1 | 3 | 11 | 144 |
| 36 | MF9M32-5x | Unknown | 1.000 | 1 | 3 | 12 | 144 |
| 37 | MF9M33-5x | Unknown | 1.000 | 1 | 4 | 1 | 144 |
| 38 | MF9M34-5x | Unknown | 1.000 | 1 | 4 | 2 | 144 |
| 39 | MF9M35-5x | Unknown | 1.000 | 1 | 4 | 3 | 144 |
| 40 | MF9M37-5x | Unknown | 1.000 | 1 | 4 | 4 | 144 |
| 41 | MF9M38-5x | Unknown | 1.000 | 1 | 4 | 5 | 144 |
| 42 | MF9M39-5x | Unknown | 1.000 | 1 | 4 | 6 | 144 |
| 43 | MF9M40-5x | Unknown | 1.000 | 1 | 4 | 7 | 144 |
| 44 | MF9M41-5x | Unknown | 1.000 | 1 | 4 | 8 | 144 |
| 45 | CCV3 | Unknown | 1.000 | 1 | 4 | 9 | 144 |
| 46 | CCB3 | Unknown | 1.000 | 1 | 4 | 10 | 144 |

## Fully Quant Calibration

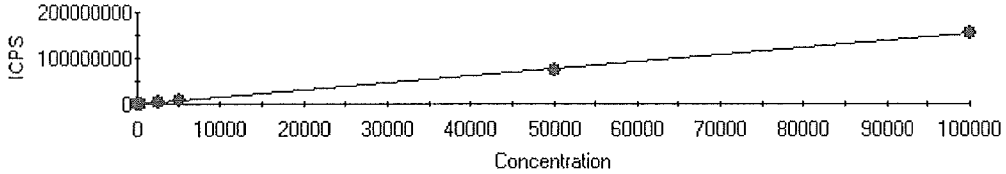
## 9Be FQ Block 1




Intercept CPS=26.527485 Intercept Conc=0.044385
Sensitivity=597.673090 Correlation Coeff=0.999986

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 26.53 | 0.00 |
| S | 1.000 | 1.042 | 0.042 | 649.47 | 4.23 |
| S10 | 10.000 | 10.215 | 0.215 | 6131.88 | 2.15 |
| S50 | 50.000 | 51.181 | 1.181 | 30616.02 | 2.36 |
| S200 | 200.000 | 207.434 | 7.434 | 124003.99 | 3.72 |
| S500 | 500.000 | 516.725 | 16.725 | 308859.02 | 3.34 |
| S2500 | 2500.000 | 2519.171 | 19.171 | 1505667.50 | 0.77 |
| S5000 | 5000.000 | 4988.432 | 11.568 | 2981478.22 | 0.23 |

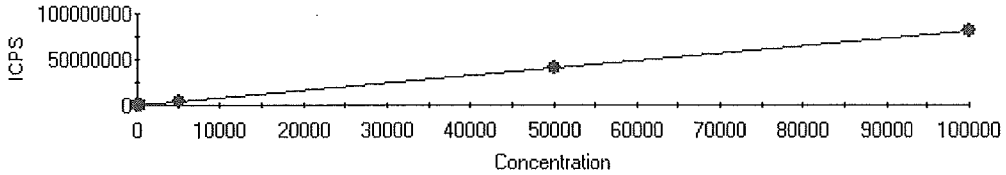
## 23Na FQ Block 1




Intercept CPS=27463.091121 Intercept Conc=17.919414
Sensitivity=1532.588695 Correlation Coeff=0.999912

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 27463.09 | 0.00 |
| S50 | 50.000 | 43.062 | 6.938 | 93459.96 | 13.88 |
| S200 | 200.000 | 187.530 | 12.470 | 314868.78 | 6.24 |
| S500 | 500.000 | 472.231 | 27.769 | 751199.28 | 5.55 |
| S2500 | 2500.000 | 2370.712 | 129.288 | 3660789.39 | 5.17 |
| S5000 | 5000.000 | 4740.724 | 259.276 | 7293043.05 | 5.19 |
| S50000 | 50000.000 | 48824.693 | 1175.307 | 74855635.72 | 2.35 |
| S100000 | 100000.000 | 100604.017 | 604.017 | 154212041.80 | 0.60 |

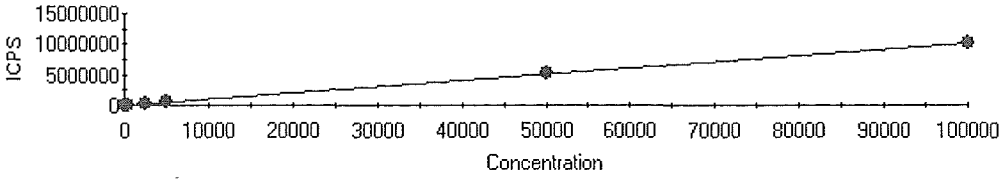
## 24Mg FQ Block 1




Intercept CPS=261.843176 Intercept Conc=0.322644
Sensitivity=811.554244 Correlation Coeff=0.999963

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 261.84 | 0.00 |
| S50 | 50.000 | 47.121 | 2.879 | 38502.98 | 5.76 |
| S200 | 200.000 | 192.632 | 7.368 | 156592.79 | 3.68 |
| S500 | 500.000 | 477.294 | 22.706 | 387611.69 | 4.54 |
| S5000 | 5000.000 | 4783.663 | 216.337 | 3882463.56 | 4.33 |
| S50000 | 50000.000 | 49254.024 | 745.976 | 39972574.38 | 1.49 |
| S100000 | 100000.000 | 100383.934 | 383.934 | 81467269.87 | 0.38 |

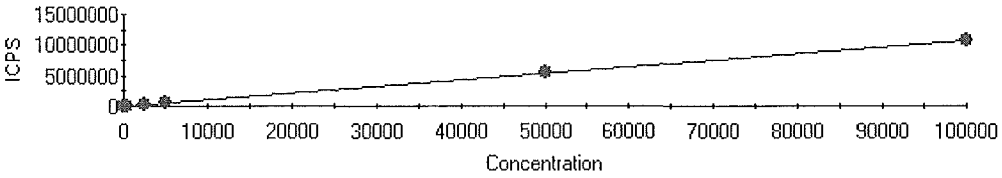
## 25Mg FQ Block 1




Intercept CPS=29.924921 Intercept Conc=0.292763
Sensitivity=102.215523 Correlation Coeff=0.999991

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 29.92 | 0.00 |
| S50 | 50.000 | 48.754 | 1.246 | 5013.29 | 2.49 |
| S200 | 200.000 | 196.048 | 3.952 | 20069.11 | 1.98 |
| S500 | 500.000 | 480.008 | 19.992 | 49094.17 | 4.00 |
| S2500 | 2500.000 | 2365.851 | 134.149 | 241856.65 | 5.37 |
| S5000 | 5000.000 | 4690.303 | 309.697 | 479451.73 | 6.19 |
| S50000 | 50000.000 | 49705.729 | 294.271 | 5080727.00 | 0.59 |
| S100000 | 100000.000 | 100166.083 | 166.083 | 10238558.45 | 0.17 |

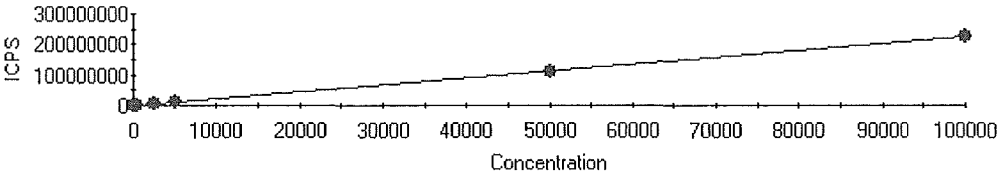
## 26Mg FQ Block 1




Intercept CPS=33.184800 Intercept Conc=0.310118
Sensitivity=107.007049 Correlation Coeff=0.999998

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 33.18 | 0.00 |
| S50 | 50.000 | 50.459 | 0.459 | 5432.69 | 0.92 |
| S200 | 200.000 | 203.015 | 3.015 | 21757.26 | 1.51 |
| S500 | 500.000 | 499.295 | 0.705 | 53461.25 | 0.14 |
| S2500 | 2500.000 | 2433.680 | 66.320 | 260454.14 | 2.65 |
| S5000 | 5000.000 | 4796.678 | 203.322 | 513311.57 | 4.07 |
| S50000 | 50000.000 | 49923.963 | 76.037 | 5342249.10 | 0.15 |
| S100000 | 100000.000 | 100049.840 | 49.840 | 10706071.31 | 0.05 |

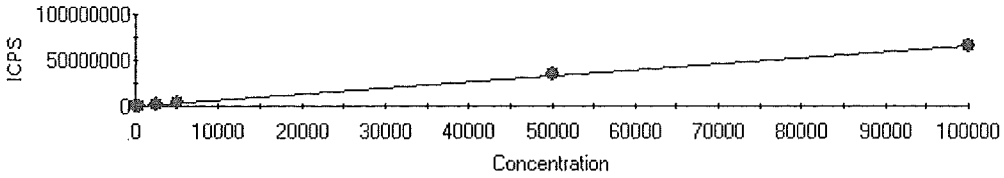
## 27Al FQ Block 1




Intercept CPS=4086.860946 Intercept Conc=1.821176
Sensitivity=2244.077833 Correlation Coeff=0.999995

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 4086.86 | 0.00 |
| S | 20.000 | 19.489 | 0.511 | 47822.27 | 2.55 |
| S50 | 50.000 | 50.073 | 0.073 | 116455.68 | 0.15 |
| S200 | 200.000 | 201.828 | 1.828 | 457004.29 | 0.91 |
| S500 | 500.000 | 506.635 | 6.635 | 1141016.26 | 1.33 |
| S2500 | 2500.000 | 2446.831 | 53.169 | 5494966.74 | 2.13 |
| S5000 | 5000.000 | 4866.314 | 133.686 | 10924473.32 | 2.67 |
| S50000 | 50000.000 | 49740.840 | 259.160 | 111626404.38 | 0.52 |
| S100000 | 100000.000 | 100137.557 | 137.557 | 224720557.68 | 0.14 |

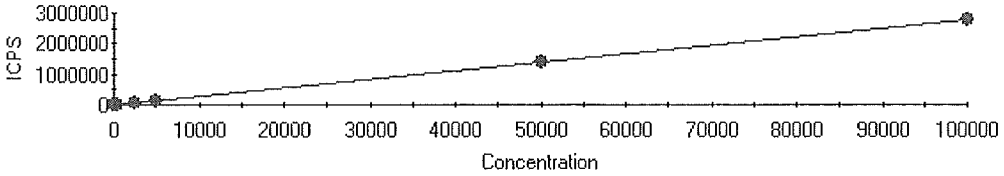
**39K FQ Block 1**




Intercept CPS=43552.668646 Intercept Conc=66.053168
Sensitivity=659.357758 Correlation Coeff=0.999928

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 43552.67 | 0.00 |
| S50 | 50.000 | 49.215 | 0.785 | 76002.69 | 1.57 |
| S200 | 200.000 | 211.248 | 11.248 | 182840.70 | 5.62 |
| S500 | 500.000 | 527.526 | 27.526 | 391381.05 | 5.51 |
| S2500 | 2500.000 | 2516.860 | 16.860 | 1703063.71 | 0.67 |
| S5000 | 5000.000 | 4953.919 | 46.081 | 3309957.36 | 0.92 |
| S50000 | 50000.000 | 51057.446 | 1057.446 | 33708676.01 | 2.11 |
| S100000 | 100000.000 | 99473.000 | 527.000 | 65631846.74 | 0.53 |

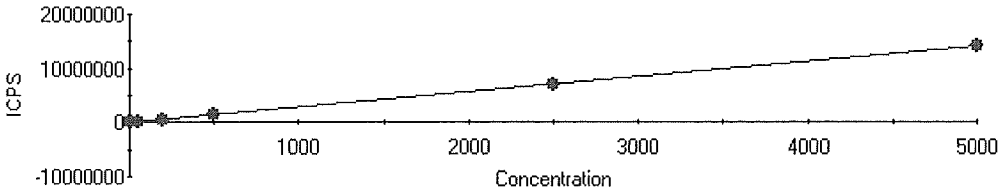
**44Ca FQ Block 1**




Intercept CPS=438.794931 Intercept Conc=15.872725
Sensitivity=27.644587 Correlation Coeff=0.999987

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 438.79 | 0.00 |
| S50 | 50.000 | 51.790 | 1.790 | 1870.51 | 3.58 |
| S200 | 200.000 | 198.887 | 1.113 | 5936.95 | 0.56 |
| S500 | 500.000 | 493.178 | 6.822 | 14072.49 | 1.36 |
| S2500 | 2500.000 | 2410.354 | 89.646 | 67072.04 | 3.59 |
| S5000 | 5000.000 | 4793.817 | 206.183 | 132961.89 | 4.12 |
| S50000 | 50000.000 | 50408.750 | 408.750 | 1393967.87 | 0.82 |
| S100000 | 100000.000 | 99808.211 | 191.789 | 2759595.59 | 0.19 |

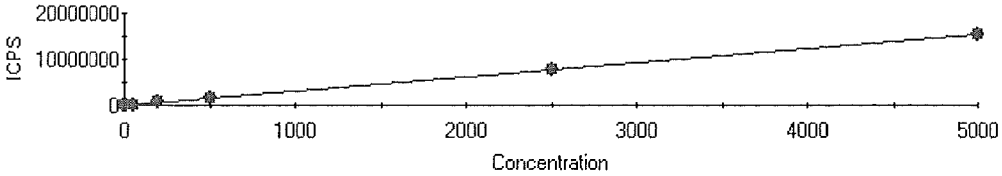
**51V FQ Block 1**




Intercept CPS=-49.088156 Intercept Conc=-0.017400
Sensitivity=2821.201719 Correlation Coeff=0.999995

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | -49.09 | 0.00 |
| S | 5.000 | 5.152 | 0.152 | 14485.65 | 3.04 |
| S10 | 10.000 | 9.576 | 0.424 | 26965.47 | 4.24 |
| S50 | 50.000 | 48.149 | 1.851 | 135789.65 | 3.70 |
| S200 | 200.000 | 197.322 | 2.678 | 556636.85 | 1.34 |
| S500 | 500.000 | 510.167 | 10.167 | 1439236.24 | 2.03 |
| S2500 | 2500.000 | 2509.143 | 9.143 | 7078748.36 | 0.37 |
| S5000 | 5000.000 | 4994.538 | 5.462 | 14090550.84 | 0.11 |

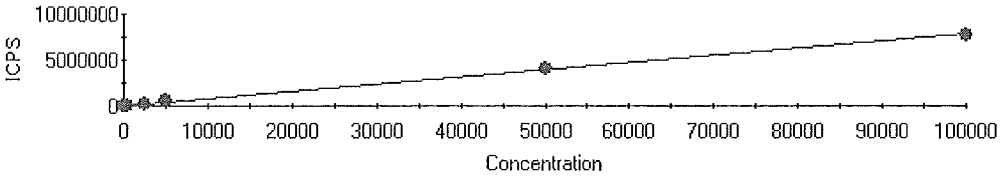
**52Cr FQ Block 1**




Intercept CPS=834.508895 Intercept Conc=0.273558
Sensitivity=3050.575806 Correlation Coeff=0.999998

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 834.51 | 0.00 |
| S | 2.000 | 1.905 | 0.095 | 6646.29 | 4.74 |
| S10 | 10.000 | 9.601 | 0.399 | 30122.63 | 3.99 |
| S50 | 50.000 | 48.582 | 1.418 | 149036.49 | 2.84 |
| S200 | 200.000 | 198.161 | 1.839 | 605340.75 | 0.92 |
| S500 | 500.000 | 507.577 | 7.577 | 1549235.42 | 1.52 |
| S2500 | 2500.000 | 2503.960 | 3.960 | 7639353.49 | 0.16 |
| S5000 | 5000.000 | 4997.351 | 2.649 | 15245632.68 | 0.05 |

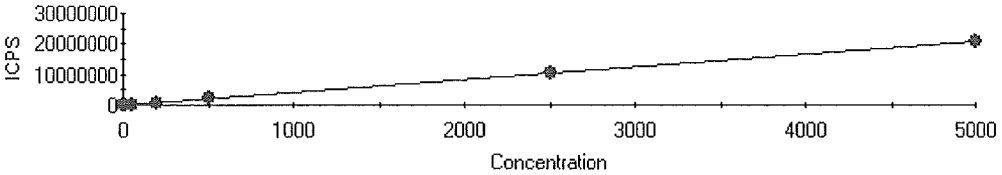
**54Fe FQ Block 1**




Intercept CPS=2778.519290 Intercept Conc=35.684235
Sensitivity=77.864057 Correlation Coeff=0.999807

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 2778.52 | 0.00 |
| S50 | 50.000 | 68.556 | 18.556 | 8116.59 | 37.11 |
| S200 | 200.000 | 279.805 | 79.805 | 24565.24 | 39.90 |
| S500 | 500.000 | 698.602 | 198.602 | 57174.53 | 39.72 |
| S2500 | 2500.000 | 3479.658 | 979.658 | 273718.80 | 39.19 |
| S5000 | 5000.000 | 7003.895 | 2003.895 | 548130.20 | 40.08 |
| S50000 | 50000.000 | 50605.259 | 605.259 | 3943109.24 | 1.21 |
| S100000 | 100000.000 | 99571.523 | 428.477 | 7755821.20 | 0.43 |

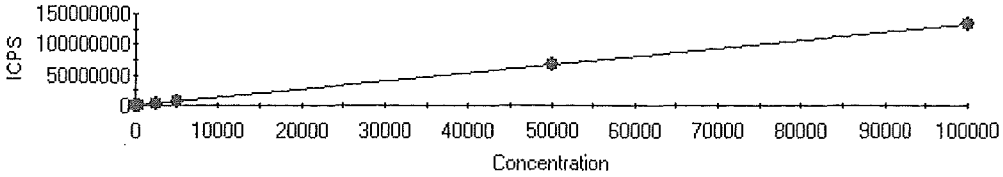
**55Mn FQ Block 1**




Intercept CPS=128.922887 Intercept Conc=0.031192
Sensitivity=4133.165865 Correlation Coeff=0.999991

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 128.92 | 0.00 |
| S | 1.000 | 0.966 | 0.034 | 4119.89 | 3.44 |
| S10 | 10.000 | 9.624 | 0.376 | 39904.67 | 3.76 |
| S50 | 50.000 | 48.470 | 1.530 | 200465.43 | 3.06 |
| S200 | 200.000 | 199.754 | 0.246 | 825744.72 | 0.12 |
| S500 | 500.000 | 507.584 | 7.584 | 2098059.14 | 1.52 |
| S2500 | 2500.000 | 2517.758 | 17.758 | 10406442.32 | 0.71 |
| S5000 | 5000.000 | 4990.388 | 9.612 | 20626231.20 | 0.19 |

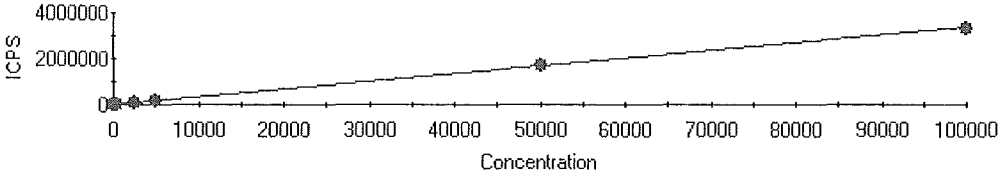
**56Fe FQ Block 1**




Intercept CPS=114695.562897 Intercept Conc=86.617939
Sensitivity=1324.154835 Correlation Coeff=0.999946

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 114695.56 | 0.00 |
| S50 | 50.000 | 48.072 | 1.928 | 178350.22 | 3.86 |
| S200 | 200.000 | 198.720 | 1.280 | 377831.66 | 0.64 |
| S500 | 500.000 | 504.993 | 4.993 | 783385.06 | 1.00 |
| S2500 | 2500.000 | 2534.708 | 34.708 | 3471041.51 | 1.39 |
| S5000 | 5000.000 | 5025.447 | 25.447 | 6769165.14 | 0.51 |
| S50000 | 50000.000 | 50919.343 | 919.343 | 67539790.08 | 1.84 |
| S100000 | 100000.000 | 99538.167 | 461.833 | 131918640.49 | 0.46 |

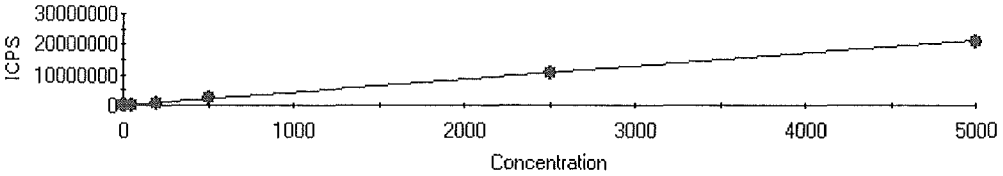
**57Fe FQ Block 1**




Intercept CPS=756.641472 Intercept Conc=22.588796
Sensitivity=33.496317 Correlation Coeff=0.999969

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 756.64 | 0.00 |
| S50 | 50.000 | 49.387 | 0.613 | 2410.93 | 1.23 |
| S200 | 200.000 | 200.388 | 0.388 | 7468.89 | 0.19 |
| S500 | 500.000 | 496.332 | 3.668 | 17381.93 | 0.73 |
| S2500 | 2500.000 | 2474.230 | 25.770 | 83634.24 | 1.03 |
| S5000 | 5000.000 | 4869.398 | 130.602 | 163863.55 | 2.61 |
| S50000 | 50000.000 | 50680.043 | 680.043 | 1698351.45 | 1.36 |
| S100000 | 100000.000 | 99667.171 | 332.829 | 3339239.82 | 0.33 |

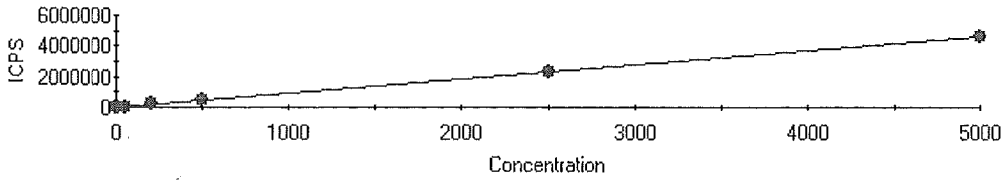
**59Co FQ Block 1**




Intercept CPS=30.518072 Intercept Conc=0.007234
Sensitivity=4218.713516 Correlation Coeff=0.999984

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 30.52 | 0.00 |
| S | 1.000 | 0.965 | 0.035 | 4103.06 | 3.46 |
| S10 | 10.000 | 9.595 | 0.405 | 40508.75 | 4.05 |
| S50 | 50.000 | 48.308 | 1.692 | 203829.45 | 3.38 |
| S200 | 200.000 | 198.999 | 1.001 | 839548.90 | 0.50 |
| S500 | 500.000 | 509.236 | 9.236 | 2148349.26 | 1.85 |
| S2500 | 2500.000 | 2522.836 | 22.836 | 10643150.78 | 0.91 |
| S5000 | 5000.000 | 4987.716 | 12.284 | 21041777.45 | 0.25 |

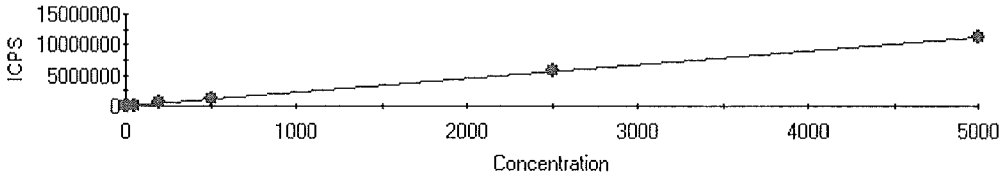
**60Ni FQ Block 1**




Intercept CPS=44.967540 Intercept Conc=0.048424
Sensitivity=928.625154 Correlation Coeff=0.999983

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 44.97 | 0.00 |
| S | 1.000 | 0.999 | 0.001 | 972.82 | 0.08 |
| S10 | 10.000 | 9.830 | 0.170 | 9173.39 | 1.70 |
| S50 | 50.000 | 50.360 | 0.360 | 46810.78 | 0.72 |
| S200 | 200.000 | 204.314 | 4.314 | 189776.27 | 2.16 |
| S500 | 500.000 | 513.056 | 13.056 | 476481.46 | 2.61 |
| S2500 | 2500.000 | 2523.722 | 23.722 | 2343636.26 | 0.95 |
| S5000 | 5000.000 | 4986.658 | 13.342 | 4630780.86 | 0.27 |

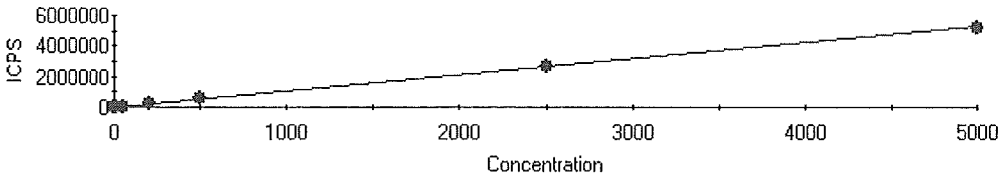
**63Cu FQ Block 1**




Intercept CPS=2038.162717 Intercept Conc=0.914037
Sensitivity=2229.846843 Correlation Coeff=0.999978

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 2038.16 | 0.00 |
| S | 2.000 | 1.950 | 0.050 | 6385.37 | 2.52 |
| S10 | 10.000 | 9.882 | 0.118 | 24074.14 | 1.18 |
| S50 | 50.000 | 49.562 | 0.438 | 112554.08 | 0.88 |
| S200 | 200.000 | 203.280 | 3.280 | 455320.36 | 1.64 |
| S500 | 500.000 | 517.643 | 17.643 | 1156301.66 | 3.53 |
| S2500 | 2500.000 | 2525.214 | 25.214 | 5632879.72 | 1.01 |
| S5000 | 5000.000 | 4985.502 | 14.498 | 11118943.96 | 0.29 |

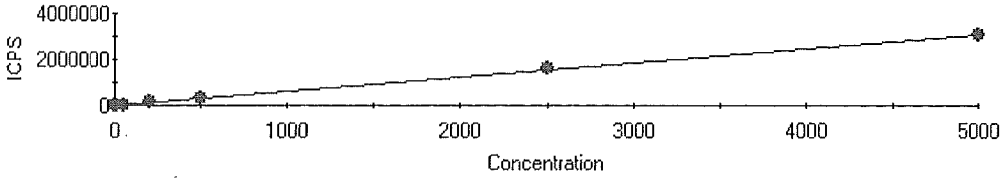
**65Cu FQ Block 1**




Intercept CPS=975.304064 Intercept Conc=0.928526
Sensitivity=1050.378432 Correlation Coeff=0.999982

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 975.30 | 0.00 |
| S | 2.000 | 1.973 | 0.027 | 3047.58 | 1.36 |
| S10 | 10.000 | 9.825 | 0.175 | 11294.95 | 1.75 |
| S50 | 50.000 | 49.697 | 0.303 | 53175.59 | 0.61 |
| S200 | 200.000 | 203.131 | 3.131 | 214339.59 | 1.57 |
| S500 | 500.000 | 513.495 | 13.495 | 540339.04 | 2.70 |
| S2500 | 2500.000 | 2523.690 | 23.690 | 2651805.04 | 0.95 |
| S5000 | 5000.000 | 4986.684 | 13.316 | 5238880.21 | 0.27 |

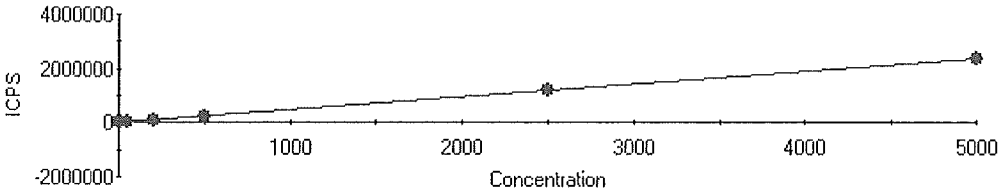
**66Zn FQ Block 1**




Intercept CPS=380.972214 Intercept Conc=0.616252
Sensitivity=618.208829 Correlation Coeff=0.999921

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 380.97 | 0.00 |
| S | 2.000 | 1.721 | 0.279 | 1445.07 | 13.94 |
| S10 | 10.000 | 10.081 | 0.081 | 6613.14 | 0.81 |
| S50 | 50.000 | 50.159 | 0.159 | 31389.77 | 0.32 |
| S200 | 200.000 | 203.498 | 3.498 | 126185.26 | 1.75 |
| S500 | 500.000 | 512.286 | 12.286 | 317080.84 | 2.46 |
| S2500 | 2500.000 | 2554.280 | 54.280 | 1579459.34 | 2.17 |
| S5000 | 5000.000 | 4971.490 | 28.510 | 3073799.91 | 0.57 |

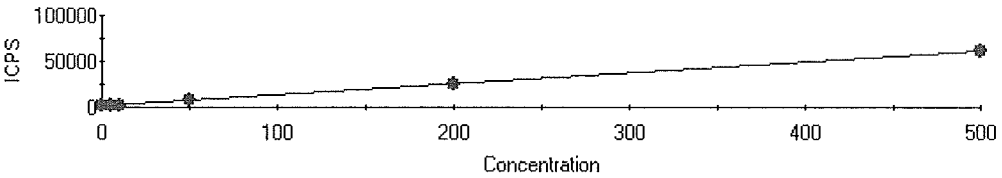
**75As FQ Block 1**




Intercept CPS=-15.123916 Intercept Conc=-0.031579
Sensitivity=478.927199 Correlation Coeff=0.999995

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | -15.12 | 0.00 |
| S | 1.000 | 0.774 | 0.226 | 355.68 | 22.58 |
| S10 | 10.000 | 9.735 | 0.265 | 4647.01 | 2.65 |
| S50 | 50.000 | 48.437 | 1.563 | 23182.49 | 3.13 |
| S200 | 200.000 | 197.055 | 2.945 | 94360.05 | 1.47 |
| S500 | 500.000 | 493.265 | 6.735 | 236222.74 | 1.35 |
| S2500 | 2500.000 | 2487.097 | 12.903 | 1191123.23 | 0.52 |
| S5000 | 5000.000 | 5007.259 | 7.259 | 2398097.44 | 0.15 |

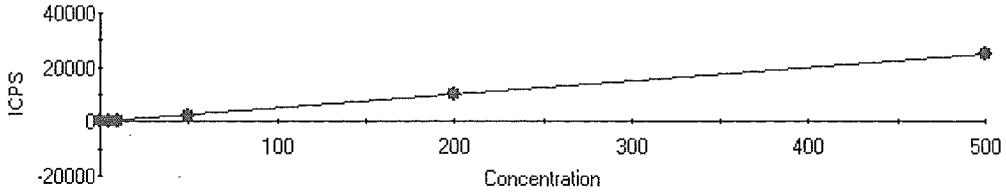
**78Se FQ Block 1**




Intercept CPS=1001.216304 Intercept Conc=8.174867
Sensitivity=122.474941 Correlation Coeff=0.999995

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 1001.22 | 0.00 |
| S | 5.000 | 4.795 | 0.205 | 1588.48 | 4.10 |
| S10 | 10.000 | 9.395 | 0.605 | 2151.90 | 6.05 |
| S50 | 50.000 | 49.635 | 0.365 | 7080.30 | 0.73 |
| S200 | 200.000 | 201.188 | 1.188 | 25641.67 | 0.59 |
| S500 | 500.000 | 499.576 | 0.424 | 62186.70 | 0.08 |

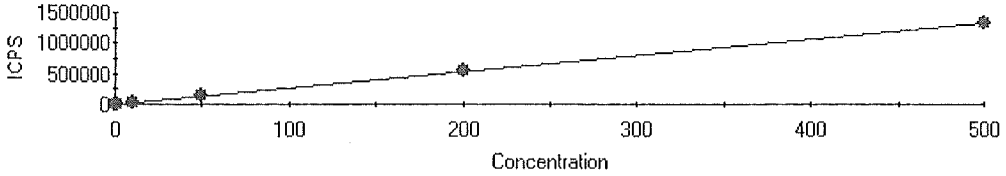
**82Se FQ Block 1**




Intercept CPS=0.746327 Intercept Conc=0.014963
Sensitivity=49.877773 Correlation Coeff=0.999999

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 0.75 | 0.00 |
| S | 5.000 | 4.341 | 0.659 | 217.27 | 13.18 |
| S10 | 10.000 | 9.748 | 0.252 | 486.93 | 2.52 |
| S50 | 50.000 | 49.299 | 0.701 | 2459.67 | 1.40 |
| S200 | 200.000 | 200.152 | 0.152 | 9983.88 | 0.08 |
| S500 | 500.000 | 500.021 | 0.021 | 24940.68 | 0.00 |

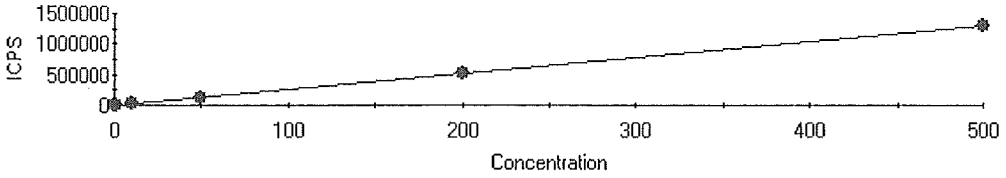
**107Ag FQ Block 1**




Intercept CPS=38.727914 Intercept Conc=0.014471
Sensitivity=2676.223610 Correlation Coeff=0.999944

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 38.73 | 0.00 |
| S | 1.000 | 1.018 | 0.018 | 2764.26 | 1.84 |
| S10 | 10.000 | 9.896 | 0.104 | 26522.56 | 1.04 |
| S50 | 50.000 | 49.441 | 0.559 | 132353.68 | 1.12 |
| S200 | 200.000 | 204.450 | 4.450 | 547193.10 | 2.23 |
| S500 | 500.000 | 498.278 | 1.722 | 1333541.77 | 0.34 |

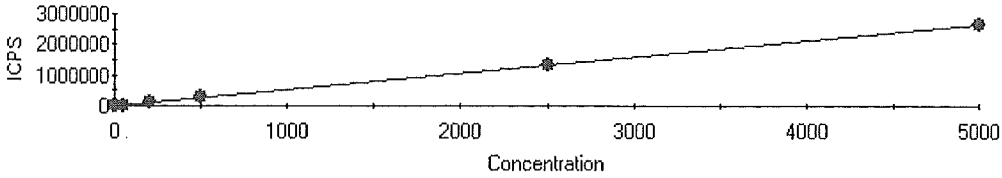
**109Ag FQ Block 1**




Intercept CPS=37.000407 Intercept Conc=0.014329
Sensitivity=2582.131157 Correlation Coeff=0.999952

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 37.00 | 0.00 |
| S | 1.000 | 1.021 | 0.021 | 2674.45 | 2.14 |
| S10 | 10.000 | 9.917 | 0.083 | 25643.14 | 0.83 |
| S50 | 50.000 | 49.490 | 0.510 | 127825.75 | 1.02 |
| S200 | 200.000 | 204.124 | 4.124 | 527113.09 | 2.06 |
| S500 | 500.000 | 498.403 | 1.597 | 1286978.61 | 0.32 |

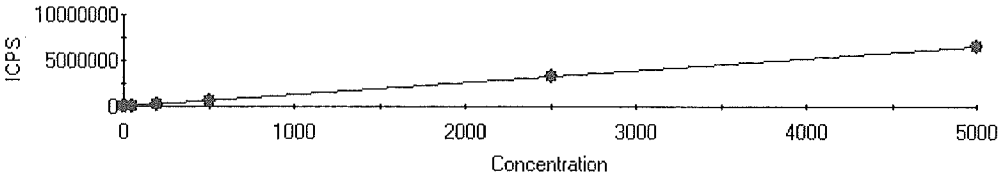
**111Cd FQ Block 1**




Intercept CPS=91.772146 Intercept Conc=0.171813
Sensitivity=534.140199 Correlation Coeff=0.999998

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 91.77 | 0.00 |
| S | 1.000 | 0.941 | 0.059 | 594.16 | 5.94 |
| S10 | 10.000 | 9.629 | 0.371 | 5235.02 | 3.71 |
| S50 | 50.000 | 48.312 | 1.688 | 25897.29 | 3.38 |
| S200 | 200.000 | 196.780 | 3.220 | 105199.82 | 1.61 |
| S500 | 500.000 | 494.873 | 5.127 | 264423.59 | 1.03 |
| S2500 | 2500.000 | 2492.127 | 7.873 | 1331237.08 | 0.31 |
| S5000 | 5000.000 | 5004.595 | 4.595 | 2673247.40 | 0.09 |

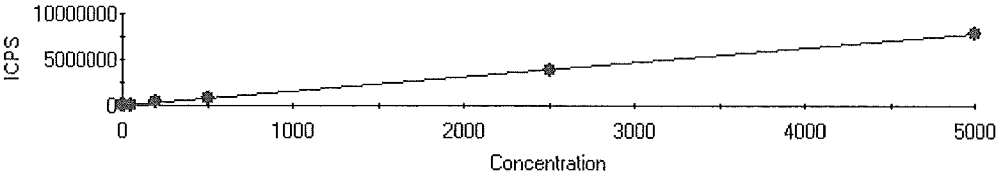
**114Cd FQ Block 1**




Intercept CPS=21.188118 Intercept Conc=0.016073
Sensitivity=1318.261867 Correlation Coeff=0.999999

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 21.19 | 0.00 |
| S | 1.000 | 0.969 | 0.031 | 1298.68 | 3.09 |
| S10 | 10.000 | 9.665 | 0.335 | 12762.63 | 3.35 |
| S50 | 50.000 | 49.034 | 0.966 | 64660.57 | 1.93 |
| S200 | 200.000 | 199.796 | 0.204 | 263404.30 | 0.10 |
| S500 | 500.000 | 502.511 | 2.511 | 662462.35 | 0.50 |
| S2500 | 2500.000 | 2506.883 | 6.883 | 3304750.10 | 0.28 |
| S5000 | 5000.000 | 4996.326 | 3.674 | 6586486.78 | 0.07 |

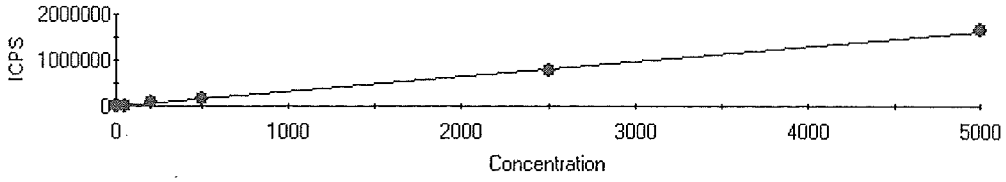
**121Sb FQ Block 1**




Intercept CPS=15.988703 Intercept Conc=0.010177
Sensitivity=1571.041889 Correlation Coeff=0.999996

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 15.99 | 0.00 |
| S | 2.000 | 1.849 | 0.151 | 2920.51 | 7.56 |
| S10 | 10.000 | 9.438 | 0.562 | 14842.93 | 5.62 |
| S50 | 50.000 | 47.221 | 2.779 | 74201.72 | 5.56 |
| S200 | 200.000 | 191.337 | 8.663 | 300614.36 | 4.33 |
| S500 | 500.000 | 486.116 | 13.884 | 763723.86 | 2.78 |
| S2500 | 2500.000 | 2497.327 | 2.673 | 3923420.78 | 0.11 |
| S5000 | 5000.000 | 5003.101 | 3.101 | 7860096.63 | 0.06 |

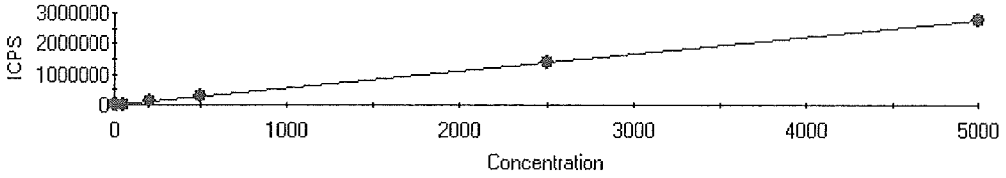
**135Ba FQ Block 1**




Intercept CPS=6.992039 Intercept Conc=0.021463
Sensitivity=325.770113 Correlation Coeff=0.999725

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 6.99 | 0.00 |
| S | 10.000 | 9.612 | 0.388 | 3138.19 | 3.88 |
| S50 | 50.000 | 47.704 | 2.296 | 15547.47 | 4.59 |
| S200 | 200.000 | 194.400 | 5.600 | 63336.70 | 2.80 |
| S500 | 500.000 | 485.841 | 14.159 | 158279.48 | 2.83 |
| S2500 | 2500.000 | 2399.086 | 100.914 | 781557.51 | 4.04 |
| S5000 | 5000.000 | 5052.121 | 52.121 | 1645836.90 | 1.04 |

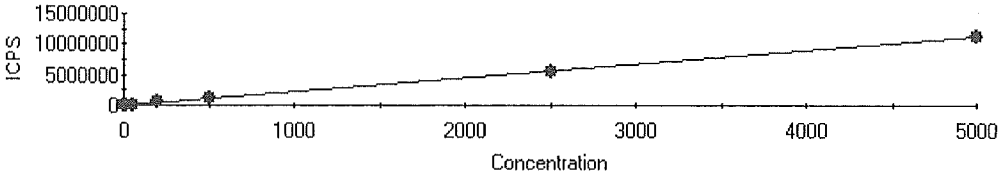
**137Ba FQ Block 1**




Intercept CPS=10.497049 Intercept Conc=0.018943
Sensitivity=554.127333 Correlation Coeff=0.999989

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 10.50 | 0.00 |
| S | 10.000 | 9.839 | 0.161 | 5462.81 | 1.61 |
| S50 | 50.000 | 49.187 | 0.813 | 27266.35 | 1.63 |
| S200 | 200.000 | 200.715 | 0.715 | 111231.96 | 0.36 |
| S500 | 500.000 | 503.102 | 3.102 | 278793.15 | 0.62 |
| S2500 | 2500.000 | 2519.740 | 19.740 | 1396267.05 | 0.79 |
| S5000 | 5000.000 | 4989.800 | 10.200 | 2764995.00 | 0.20 |

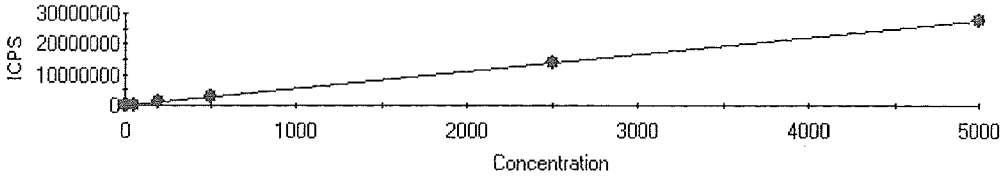
**203Tl FQ Block 1**




Intercept CPS=24.735019 Intercept Conc=0.010935
Sensitivity=2262.049151 Correlation Coeff=0.999988

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 24.74 | 0.00 |
| S | 1.000 | 0.937 | 0.063 | 2144.58 | 6.29 |
| S10 | 10.000 | 9.483 | 0.517 | 21475.80 | 5.17 |
| S50 | 50.000 | 47.579 | 2.421 | 107651.11 | 4.84 |
| S200 | 200.000 | 194.086 | 5.914 | 439056.80 | 2.96 |
| S500 | 500.000 | 495.227 | 4.773 | 1120251.87 | 0.95 |
| S2500 | 2500.000 | 2478.319 | 21.681 | 5606104.61 | 0.87 |
| S5000 | 5000.000 | 5011.580 | 11.580 | 11336463.98 | 0.23 |

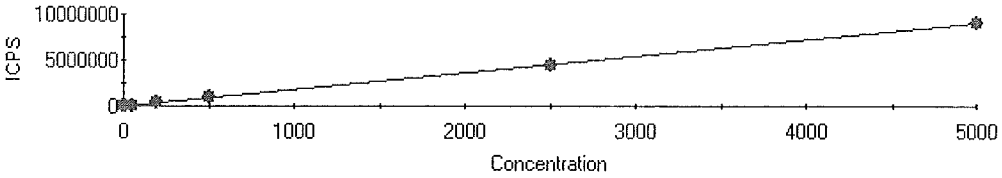
**205Tl FQ Block 1**




Intercept CPS=52.998001 Intercept Conc=0.009636
Sensitivity=5500.038407 Correlation Coeff=0.999991

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 53.00 | 0.00 |
| S | 1.000 | 0.941 | 0.059 | 5226.00 | 5.95 |
| S10 | 10.000 | 9.373 | 0.627 | 51607.25 | 6.27 |
| S50 | 50.000 | 47.022 | 2.978 | 258678.55 | 5.96 |
| S200 | 200.000 | 194.080 | 5.920 | 1067502.11 | 2.96 |
| S500 | 500.000 | 502.947 | 2.947 | 2766278.24 | 0.59 |
| S2500 | 2500.000 | 2482.350 | 17.650 | 13653075.39 | 0.71 |
| S5000 | 5000.000 | 5008.798 | 8.798 | 27548634.31 | 0.18 |

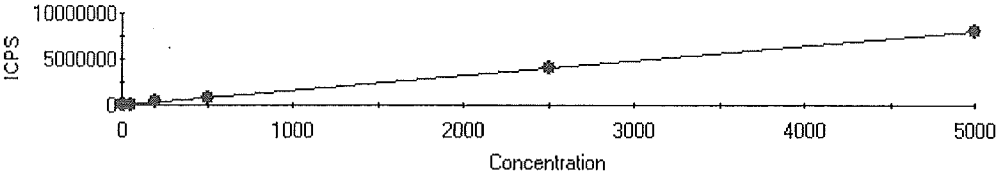
**206Pb FQ Block 1**




Intercept CPS=24.497312 Intercept Conc=0.013567
Sensitivity=1805.602356 Correlation Coeff=0.999979

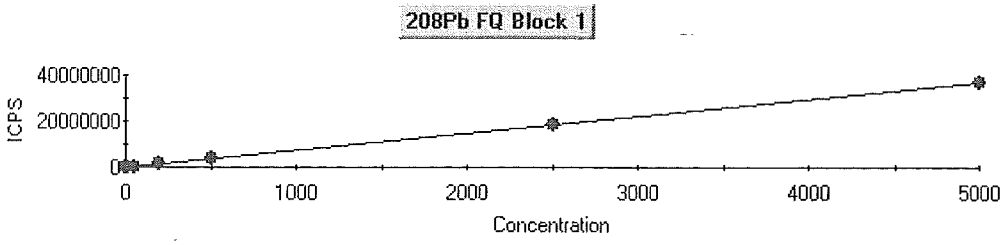
| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 24.50 | 0.00 |
| S | 1.000 | 0.930 | 0.070 | 1702.98 | 7.04 |
| S10 | 10.000 | 9.929 | 0.071 | 17951.95 | 0.71 |
| S50 | 50.000 | 49.267 | 0.733 | 88980.64 | 1.47 |
| S200 | 200.000 | 199.308 | 0.692 | 359895.06 | 0.35 |
| S500 | 500.000 | 507.029 | 7.029 | 915517.12 | 1.41 |
| S2500 | 2500.000 | 2472.445 | 27.555 | 4464276.35 | 1.10 |
| S5000 | 5000.000 | 5013.110 | 13.110 | 9051707.67 | 0.26 |

**207Pb FQ Block 1**




Intercept CPS=28.979038 Intercept Conc=0.017917
Sensitivity=1617.408842 Correlation Coeff=0.999990

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | 0.000 | 0.000 | 28.98 | 0.00 |
| S | 1.000 | 0.976 | 0.024 | 1607.61 | 2.40 |
| S10 | 10.000 | 9.272 | 0.728 | 15024.84 | 7.28 |
| S50 | 50.000 | 46.406 | 3.594 | 75087.19 | 7.19 |
| S200 | 200.000 | 187.997 | 12.003 | 304097.56 | 6.00 |
| S500 | 500.000 | 477.333 | 22.667 | 772071.10 | 4.53 |
| S2500 | 2500.000 | 2497.470 | 2.530 | 4039459.01 | 0.10 |
| S5000 | 5000.000 | 5004.049 | 4.049 | 8093622.47 | 0.08 |




Intercept CPS=127.002534 Intercept Conc=0.017148
Sensitivity=7406.336430 Correlation Coeff=0.999993

| Label | Defined | Measured | Error | Mean CPS | % Error |
|---|---|---|---|---|---|
| S0 | 0.000 | -0.000 | 0.000 | 127.00 | 0.00 |
| S | 1.000 | 0.951 | 0.049 | 7169.17 | 4.92 |
| S10 | 10.000 | 9.478 | 0.522 | 70323.25 | 5.22 |
| S50 | 50.000 | 47.298 | 2.702 | 350431.46 | 5.40 |
| S200 | 200.000 | 192.467 | 7.533 | 1425603.92 | 3.77 |
| S500 | 500.000 | 492.858 | 7.142 | 3650396.53 | 1.43 |
| S2500 | 2500.000 | 2484.266 | 15.734 | 18399433.15 | 0.63 |
| S5000 | 5000.000 | 5008.911 | 8.911 | 37097806.03 | 0.18 |

## Dilution Corrected Concentrations

S0 06/17/2015 14:32:54

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | 98.21% | 0.0110 | -0.1411 | -0.0658 | -0.0939 | 0.2598 | -0.2798 | 0.1306 | -0.9235 |
| 2 | 14:34:15 | 100.46% | -0.0152 | -0.1910 | 0.0398 | -0.0976 | 0.0161 | -0.2940 | 0.7266 | -0.6182 |
| 3 | 14:34:55 | 100.26% | 0.0043 | 0.0797 | -0.0344 | -0.0980 | -0.1241 | -0.1812 | -0.5501 | -4.9240 |
| 4 | 14:35:35 | 99.72% | -0.0010 | 0.3851 | 0.0485 | 0.0510 | 0.1121 | 0.3889 | 1.0946 | 1.5608 |
| 5 | 14:36:15 | 101.35% | 0.0010 | -0.1327 | 0.0119 | 0.2385 | -0.2640 | 0.3661 | -1.4017 | 4.9049 |
| x | | 100.00% | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | -0.0000 |
| %RSD | | 1.16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | 98.54% | 0.0051 | -0.0528 | 0.0009 | 0.3274 | -0.0042 | 0.0612 | 1.0680 | -0.0000 |
| 2 | 14:34:15 | 100.08% | 0.0016 | 0.0130 | 0.0016 | -0.4699 | -0.0028 | -0.9236 | 0.3944 | -0.0007 |
| 3 | 14:34:55 | 100.69% | 0.0015 | 0.0319 | -0.0319 | 0.9094 | 0.0013 | 0.2021 | -1.8506 | 0.0016 |
| 4 | 14:35:35 | 99.47% | -0.0048 | -0.0147 | 0.0172 | -0.4439 | 0.0022 | 0.4008 | 2.4984 | 0.0017 |
| 5 | 14:36:15 | 101.23% | -0.0034 | 0.0225 | 0.0122 | -0.3231 | 0.0035 | 0.2595 | -2.1102 | -0.0025 |
| x | | 100.00% | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
| %RSD | | 1.05 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | -0.0102 | 0.0157 | -0.0855 | -0.0253 | 0.0759 | 0.2431 | 0.3723 | -1.3122 | 98.54% |
| 2 | 14:34:15 | -0.0081 | -0.0813 | 0.0669 | -0.0512 | -0.1180 | -0.2890 | -0.3016 | 1.2948 | 100.33% |
| 3 | 14:34:55 | 0.0025 | 0.0047 | 0.0385 | -0.0443 | 0.0114 | 0.1805 | -0.0349 | 0.7618 | 100.11% |
| 4 | 14:35:35 | 0.0109 | -0.0039 | 0.0120 | 0.0915 | 0.0277 | 0.3472 | 0.0487 | -0.8408 | 100.56% |
| 5 | 14:36:15 | 0.0049 | 0.0648 | -0.0320 | 0.0293 | 0.0030 | -0.4818 | -0.0845 | 0.0963 | 100.47% |
| x | | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.00% |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.84 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.08% | -0.0032 | -0.4172 | -0.0011 |
| 2 | 14:34:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.32% | -0.0010 | 0.1185 | -0.0037 |
| 3 | 14:34:55 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.95% | -0.0005 | -0.1813 | 0.0041 |
| 4 | 14:35:35 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.40% | 0.0023 | 0.4037 | -0.0003 |
| 5 | 14:36:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.24% | 0.0023 | 0.0762 | 0.0011 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.00% | 0.0000 | -0.0000 | -0.0000 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.54 | 0.0000 | 0.0000 | 0.0000 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | 0.0072 | -0.0015 | 0.0000 | 0.0000 | -0.0038 | -0.0060 | -0.0007 | 99.16% | -0.0004 |
| 2 | 14:34:15 | -0.0113 | -0.0004 | 0.0000 | 0.0000 | -0.0007 | 0.0092 | -0.0099 | 100.05% | -0.0010 |
| 3 | 14:34:55 | 0.0057 | -0.0059 | 0.0000 | 0.0000 | 0.0010 | -0.0061 | -0.0009 | 99.85% | -0.0048 |
| 4 | 14:35:35 | -0.0073 | 0.0039 | 0.0000 | 0.0000 | 0.0057 | -0.0061 | 0.0081 | 99.99% | 0.0018 |
| 5 | 14:36:15 | 0.0057 | 0.0039 | 0.0000 | 0.0000 | -0.0023 | 0.0090 | 0.0035 | 100.95% | 0.0044 |
| x | | 0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.00% | 0.0000 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.64 | 0.0000 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:33:34 | -0.0007 | 0.0017 | 0.0053 | 0.0045 | 99.67% | 0.1350 |
| 2 | 14:34:15 | 0.0019 | 0.0030 | -0.0025 | -0.0003 | 100.13% | 0.7970 |
| 3 | 14:34:55 | 0.0013 | -0.0039 | -0.0040 | -0.0019 | 99.81% | 0.1341 |
| 4 | 14:35:35 | -0.0019 | -0.0011 | -0.0102 | -0.0033 | 99.84% | -0.5330 |
| 5 | 14:36:15 | -0.0006 | 0.0002 | 0.0113 | 0.0010 | 100.55% | -0.5330 |
| x | | -0.0000 | -0.0000 | 0.0000 | -0.0000 | 100.00% | 0.0000 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.35 | 0.0000 |

S 06/17/2015 14:37:16

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 99.17% | 1.0668 | 446.1800 | 466.9900 | 480.0600 | 501.3100 | 19.5810 | 527.4900 | 479.5300 |
| 2 | 14:38:37 | 99.75% | 1.0683 | 456.3700 | 467.9200 | 471.4000 | 502.0500 | 19.7140 | 549.5800 | 497.2200 |
| 3 | 14:39:18 | 100.56% | 1.0874 | 467.6900 | 476.7900 | 485.6400 | 500.7200 | 19.0720 | 550.7400 | 507.1900 |
| 4 | 14:39:58 | 101.75% | 1.0166 | 468.8500 | 479.4600 | 481.0600 | 501.3600 | 19.5120 | 546.0000 | 487.6900 |
| 5 | 14:40:38 | 100.99% | 0.9723 | 454.4400 | 466.4300 | 475.0800 | 481.3400 | 19.5670 | 529.7200 | 483.5000 |
| X | | 100.45% | 1.0423 | 458.7000 | 471.5200 | 478.6500 | 497.3500 | 19.4890 | 540.7100 | 491.0300 |
| %RSD | | 1.01 | 4.5166 | 2.0796 | 1.2994 | 1.1539 | 1.8020 | 1.2569 | 2.0731 | 2.2754 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 98.58% | -0.0031 | 5.0914 | 1.8667 | 197.1700 | 0.9723 | 198.5700 | 194.1200 | 0.9510 |
| 2 | 14:38:37 | 99.77% | 0.0016 | 5.1796 | 1.9579 | 194.1700 | 0.9418 | 199.2100 | 190.6800 | 0.9651 |
| 3 | 14:39:18 | 100.21% | 0.0016 | 5.2395 | 1.9243 | 191.7900 | 1.0194 | 203.2800 | 197.5400 | 0.9341 |
| 4 | 14:39:58 | 101.34% | -0.0018 | 5.1929 | 1.9000 | 190.4700 | 0.9495 | 199.8400 | 202.5600 | 1.0035 |
| 5 | 14:40:38 | 102.06% | -0.0035 | 5.0564 | 1.8767 | 188.1100 | 0.9449 | 195.5100 | 185.3200 | 0.9730 |
| X | | 100.39% | -0.0010 | 5.1520 | 1.9051 | 192.3400 | 0.9656 | 199.2800 | 194.0400 | 0.9654 |
| %RSD | | 1.36 | 240.8100 | 1.4685 | 1.9399 | 1.8086 | 3.3542 | 1.3973 | 3.3810 | 2.6881 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 0.9748 | 1.8989 | 1.9267 | 1.6779 | 0.8152 | 4.7622 | 4.6185 | 0.5812 | 99.62% |
| 2 | 14:38:37 | 0.9990 | 1.9585 | 1.8981 | 1.6388 | 0.6134 | 4.5634 | 4.1725 | 1.1071 | 99.65% |
| 3 | 14:39:18 | 1.0677 | 2.0185 | 2.0378 | 1.9218 | 0.7557 | 5.2527 | 3.9933 | 0.9992 | 99.91% |
| 4 | 14:39:58 | 0.9503 | 1.9698 | 1.9633 | 1.5943 | 0.8056 | 4.8618 | 4.2284 | -0.1261 | 100.61% |
| 5 | 14:40:38 | 1.0040 | 1.9020 | 2.0387 | 1.7735 | 0.8812 | 4.5348 | 4.6923 | 0.1912 | 101.33% |
| X | | 0.9992 | 1.9496 | 1.9729 | 1.7213 | 0.7742 | 4.7950 | 4.3410 | 0.5505 | 100.23% |
| %RSD | | 4.3897 | 2.5750 | 3.2424 | 7.5608 | 12.9650 | 6.0481 | 6.9341 | 95.2120 | 0.73 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.81% | 0.9842 | 0.1100 | 0.9858 |
| 2 | 14:38:37 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.38% | 1.0390 | 0.2344 | 1.0144 |
| 3 | 14:39:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.67% | 1.0441 | -0.1798 | 1.0396 |
| 4 | 14:39:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.90% | 1.0210 | -0.0571 | 1.0588 |
| 5 | 14:40:38 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.69% | 1.0038 | -0.4257 | 1.0086 |
| X | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.49% | 1.0184 | -0.0637 | 1.0214 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.42 | 2.4421 | 403.2600 | 2.7741 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 0.8960 | 0.9955 | 0.0000 | 0.0000 | 1.7558 | 9.6985 | 9.5765 | 99.95% | 0.9171 |
| 2 | 14:38:37 | 1.0090 | 0.8939 | 0.0000 | 0.0000 | 1.8092 | 9.7731 | 10.0680 | 99.98% | 0.9572 |
| 3 | 14:39:18 | 0.9274 | 1.0682 | 0.0000 | 0.0000 | 1.8988 | 9.1869 | 10.0250 | 100.56% | 0.9475 |
| 4 | 14:39:58 | 0.9756 | 0.9462 | 0.0000 | 0.0000 | 1.8634 | 9.8422 | 9.9406 | 101.23% | 0.9767 |
| 5 | 14:40:38 | 0.8949 | 0.9416 | 0.0000 | 0.0000 | 1.9168 | 9.5578 | 9.5874 | 101.44% | 0.8873 |
| X | | 0.9406 | 0.9691 | 0.0000 | 0.0000 | 1.8488 | 9.6117 | 9.8395 | 100.63% | 0.9371 |
| %RSD | | 5.3602 | 6.8139 | 0.0000 | 0.0000 | 3.5828 | 2.7036 | 2.4341 | 0.69 | 3.7590 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:37:57 | 0.9104 | 0.8777 | 0.9446 | 0.9303 | 100.06% | 0.7978 |
| 2 | 14:38:37 | 0.9376 | 0.8960 | 0.9712 | 0.9455 | 99.70% | -0.5330 |
| 3 | 14:39:18 | 0.9798 | 0.9329 | 0.9987 | 0.9728 | 100.50% | 2.1171 |
| 4 | 14:39:58 | 0.9416 | 0.9832 | 1.0308 | 0.9838 | 101.42% | 0.1235 |
| 5 | 14:40:38 | 0.9334 | 0.9581 | 0.9348 | 0.9217 | 100.56% | 0.1291 |
| X | | 0.9405 | 0.9296 | 0.9760 | 0.9508 | 100.45% | 0.5269 |
| %RSD | | 2.6630 | 4.6648 | 4.0415 | 2.8172 | 0.64 | 190.8900 |

**S10** 06/17/2015 14:41:39

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 101.10% | 10.4560 | 9.3913 | 9.5492 | 9.9046 | 9.6609 | 9.6967 | 9.3174 | 10.6990 |
| 2 | 14:43:00 | 102.66% | 10.2350 | 9.0799 | 9.6173 | 11.6370 | 10.7220 | 9.5774 | 10.2110 | 10.8230 |
| 3 | 14:43:40 | 101.99% | 10.2790 | 9.1389 | 9.7884 | 8.7801 | 11.0450 | 9.6534 | 9.7179 | 11.9730 |
| 4 | 14:44:20 | 103.05% | 10.2370 | 8.8915 | 9.8511 | 9.3130 | 10.1750 | 10.0170 | 8.8861 | 9.3048 |
| 5 | 14:45:00 | 102.81% | 9.8682 | 8.4086 | 9.0646 | 9.0190 | 10.8530 | 10.2270 | 8.6010 | 11.4490 |
| x | | 102.32% | 10.2150 | 8.9820 | 9.5741 | 9.7307 | 10.4910 | 9.8342 | 9.3467 | 10.8500 |
| %RSD | | 0.77 | 2.0972 | 4.0855 | 3.2395 | 11.7720 | 5.3941 | 2.8080 | 6.8803 | 9.2515 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 101.35% | 0.0030 | 9.6448 | 9.7878 | 12.2510 | 9.7916 | 10.3320 | 9.2738 | 9.7567 |
| 2 | 14:43:00 | 101.53% | -0.0002 | 9.6632 | 9.6936 | 13.0480 | 9.9073 | 8.7938 | 13.5860 | 9.6907 |
| 3 | 14:43:40 | 102.93% | -0.0004 | 9.6330 | 9.7636 | 13.4310 | 9.7555 | 8.0935 | 11.7190 | 9.6881 |
| 4 | 14:44:20 | 103.73% | -0.0021 | 9.6217 | 9.4563 | 12.7240 | 9.3940 | 8.1697 | 9.8988 | 9.6297 |
| 5 | 14:45:00 | 103.14% | 0.0058 | 9.3151 | 9.3029 | 11.9690 | 9.2693 | 7.5798 | 9.2883 | 9.2094 |
| x | | 102.54% | 0.0012 | 9.5756 | 9.6008 | 12.6840 | 9.6236 | 8.5938 | 10.7530 | 9.5949 |
| %RSD | | 1.02 | 260.2700 | 1.5289 | 2.2081 | 4.6482 | 2.8664 | 12.3700 | 17.4130 | 2.2945 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 10.2590 | 9.7478 | 9.8648 | 10.0510 | 9.6679 | 9.7960 | 9.4503 | -1.0007 | 99.82% |
| 2 | 14:43:00 | 9.8068 | 10.1930 | 10.0170 | 10.3540 | 9.8110 | 9.5237 | 9.8265 | 0.0677 | 100.68% |
| 3 | 14:43:40 | 9.8427 | 10.0380 | 10.1510 | 10.4210 | 10.2180 | 9.1273 | 10.3190 | 0.1447 | 101.62% |
| 4 | 14:44:20 | 9.6980 | 9.8093 | 9.7225 | 10.0810 | 9.4453 | 9.3946 | 9.8242 | 0.0304 | 101.31% |
| 5 | 14:45:00 | 9.5434 | 9.6229 | 9.3686 | 9.4974 | 9.5306 | 9.1346 | 9.3174 | 1.0389 | 102.02% |
| x | | 9.8300 | 9.8823 | 9.8247 | 10.0810 | 9.7345 | 9.3952 | 9.7476 | 0.0562 | 101.09% |
| %RSD | | 2.7136 | 2.3279 | 3.0676 | 3.6160 | 3.1207 | 2.9956 | 4.0144 | 1287.0000 | 0.85 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.86% | 9.8594 | -0.2046 | 9.7461 |
| 2 | 14:43:00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.83% | 9.7391 | 0.2686 | 10.0440 |
| 3 | 14:43:40 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.83% | 10.0730 | 0.4129 | 9.9849 |
| 4 | 14:44:20 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.29% | 10.2420 | -0.0598 | 10.2180 |
| 5 | 14:45:00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.70% | 9.5672 | 0.3070 | 9.5895 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.10% | 9.8960 | 0.1448 | 9.9167 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.79 | 2.6956 | 181.8500 | 2.5120 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 9.8560 | 9.9369 | 0.0000 | 0.0000 | 9.5609 | 9.9062 | 9.8184 | 100.19% | 9.3600 |
| 2 | 14:43:00 | 9.5761 | 9.8235 | 0.0000 | 0.0000 | 9.4422 | 9.9105 | 10.0040 | 101.41% | 9.5086 |
| 3 | 14:43:40 | 9.7015 | 9.8914 | 0.0000 | 0.0000 | 9.5699 | 9.5434 | 10.0470 | 102.26% | 9.7192 |
| 4 | 14:44:20 | 9.6833 | 9.4158 | 0.0000 | 0.0000 | 9.4027 | 9.6753 | 9.6342 | 102.88% | 9.6485 |
| 5 | 14:45:00 | 9.3284 | 9.2591 | 0.0000 | 0.0000 | 9.2125 | 9.3462 | 9.7566 | 103.55% | 9.1788 |
| x | | 9.6290 | 9.6653 | 0.0000 | 0.0000 | 9.4376 | 9.6763 | 9.8519 | 102.06% | 9.4830 |
| %RSD | | 2.0305 | 3.1771 | 0.0000 | 0.0000 | 1.5410 | 2.5013 | 1.7481 | 1.28 | 2.3072 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:42:19 | 9.4246 | 10.1840 | 9.3103 | 9.5977 | 100.26% | -0.5330 |
| 2 | 14:43:00 | 9.4924 | 10.0040 | 9.2964 | 9.4788 | 101.63% | 0.1222 |
| 3 | 14:43:40 | 9.5791 | 9.9107 | 9.3998 | 9.5706 | 101.94% | 0.1202 |
| 4 | 14:44:20 | 9.3476 | 9.9640 | 9.2673 | 9.5241 | 102.98% | 0.1136 |
| 5 | 14:45:00 | 9.0234 | 9.5808 | 9.0840 | 9.2182 | 103.12% | -0.5330 |
| x | | 9.3734 | 9.9288 | 9.2715 | 9.4779 | 101.99% | -0.1420 |
| %RSD | | 2.2772 | 2.2161 | 1.2504 | 1.6049 | 1.14 | 251.3100 |

**S50** 06/17/2015 14:46:02

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 101.84% | 51.4820 | 43.4550 | 47.0390 | 52.3740 | 49.6730 | 49.7410 | 48.7090 | 52.9590 |
| 2 | 14:47:23 | 101.96% | 51.8740 | 42.9830 | 46.7810 | 48.7240 | 52.9530 | 50.3200 | 49.6850 | 50.1400 |
| 3 | 14:48:04 | 103.58% | 51.3900 | 43.2270 | 47.6270 | 49.3400 | 51.2190 | 50.3020 | 49.8960 | 52.3470 |
| 4 | 14:48:44 | 103.63% | 51.2710 | 43.7470 | 48.1650 | 48.1360 | 50.5850 | 50.6160 | 50.4590 | 51.3870 |
| 5 | 14:49:24 | 104.03% | 49.8880 | 41.9000 | 45.9920 | 45.1940 | 47.8660 | 49.3870 | 47.3240 | 52.1180 |
| x | | 103.01% | 51.1810 | 43.0620 | 47.1210 | 48.7540 | 50.4590 | 50.0730 | 49.2150 | 51.7900 |
| %RSD | | 1.00 | 1.4794 | 1.6451 | 1.7576 | 5.2802 | 3.7279 | 0.9933 | 2.5018 | 2.0862 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 102.20% | 0.0060 | 48.6310 | 48.4030 | 70.6290 | 48.6640 | 48.8970 | 49.2960 | 48.8180 |
| 2 | 14:47:23 | 101.48% | 0.0077 | 48.1870 | 48.9860 | 70.2170 | 48.8810 | 48.4770 | 47.5440 | 48.5820 |
| 3 | 14:48:04 | 103.24% | 0.0042 | 48.7920 | 48.8640 | 68.8080 | 49.2000 | 48.3080 | 49.8440 | 48.4840 |
| 4 | 14:48:44 | 102.67% | 0.0043 | 48.5200 | 48.8610 | 68.3900 | 48.4290 | 47.6660 | 51.6940 | 48.3630 |
| 5 | 14:49:24 | 102.48% | -0.0051 | 46.6170 | 47.7940 | 64.7380 | 47.1790 | 47.0130 | 48.5580 | 47.2950 |
| x | | 102.41% | 0.0034 | 48.1490 | 48.5820 | 68.5560 | 48.4700 | 48.0720 | 49.3870 | 48.3080 |
| %RSD | | 0.63 | 144.5700 | 1.8380 | 1.0159 | 3.3990 | 1.6006 | 1.5378 | 3.1408 | 1.2228 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 50.0270 | 49.7090 | 49.3120 | 50.2290 | 49.4490 | 49.8040 | 49.8350 | 1.0402 | 99.26% |
| 2 | 14:47:23 | 50.2260 | 49.7270 | 49.5660 | 50.7890 | 47.9060 | 49.1960 | 49.5720 | 0.5298 | 101.42% |
| 3 | 14:48:04 | 51.1440 | 50.2240 | 50.9640 | 50.9020 | 48.7240 | 51.6720 | 49.9080 | -1.9996 | 100.68% |
| 4 | 14:48:44 | 50.5490 | 49.4140 | 49.9700 | 50.5800 | 48.1800 | 49.3220 | 48.8400 | -0.6852 | 101.86% |
| 5 | 14:49:24 | 49.8560 | 48.7370 | 48.6710 | 48.2950 | 47.9240 | 48.1830 | 48.3410 | -0.0290 | 101.42% |
| x | | 50.3600 | 49.5620 | 49.6970 | 50.1590 | 48.4370 | 49.6350 | 49.2990 | -0.2288 | 100.93% |
| %RSD | | 1.0094 | 1.0998 | 1.7133 | 2.1391 | 1.3525 | 2.5832 | 1.3833 | 515.8300 | 1.01 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.07% | 49.1770 | 1.2393 | 49.4330 |
| 2 | 14:47:23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.94% | 49.6150 | -1.1067 | 49.3780 |
| 3 | 14:48:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.81% | 49.8740 | -0.1315 | 50.1170 |
| 4 | 14:48:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.61% | 50.3570 | 0.6248 | 50.6040 |
| 5 | 14:49:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.63% | 48.1820 | 0.3273 | 47.9170 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.21% | 49.4410 | 0.1906 | 49.4900 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.71 | 1.6653 | 461.3600 | 2.0520 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 48.2050 | 49.9160 | 0.0000 | 0.0000 | 47.9910 | 48.1180 | 48.8570 | 101.52% | 47.6150 |
| 2 | 14:47:23 | 48.6350 | 49.2250 | 0.0000 | 0.0000 | 47.8220 | 48.3500 | 49.2060 | 101.88% | 47.7730 |
| 3 | 14:48:04 | 49.1490 | 49.0560 | 0.0000 | 0.0000 | 47.1200 | 48.3260 | 49.9000 | 102.20% | 48.1120 |
| 4 | 14:48:44 | 48.4240 | 49.3940 | 0.0000 | 0.0000 | 47.0980 | 47.0770 | 50.0620 | 103.19% | 48.1290 |
| 5 | 14:49:24 | 47.1490 | 47.5780 | 0.0000 | 0.0000 | 46.0730 | 46.6480 | 47.9100 | 102.57% | 46.2670 |
| x | | 48.3120 | 49.0340 | 0.0000 | 0.0000 | 47.2210 | 47.7040 | 49.1870 | 102.27% | 47.5790 |
| %RSD | | 1.5289 | 1.7849 | 0.0000 | 0.0000 | 1.6052 | 1.6517 | 1.7643 | 0.63 | 1.6101 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:46:43 | 47.0320 | 49.5560 | 47.4900 | 47.9210 | 100.87% | 0.1271 |
| 2 | 14:47:23 | 47.2900 | 49.9370 | 46.6290 | 47.8180 | 101.58% | -0.5330 |
| 3 | 14:48:04 | 47.4920 | 49.1530 | 46.3430 | 47.3340 | 102.36% | 0.1175 |
| 4 | 14:48:44 | 47.7740 | 49.5660 | 46.3060 | 47.5730 | 102.42% | -0.5330 |
| 5 | 14:49:24 | 45.5250 | 48.1210 | 45.2650 | 45.8440 | 102.87% | -0.5330 |
| x | | 47.0220 | 49.2670 | 46.4060 | 47.2980 | 102.02% | -0.2709 |
| %RSD | | 1.8723 | 1.4164 | 1.7177 | 1.7845 | 0.78 | 132.5000 |

**S200** 06/17/2015 14:50:26

User-Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 103.03% | 207.4100 | 184.3500 | 192.1500 | 201.6600 | 201.5500 | 201.7400 | 212.4600 | 203.0700 |
| 2 | 14:51:46 | 104.11% | 208.0200 | 188.4500 | 194.8300 | 198.7800 | 203.2100 | 203.9800 | 212.9500 | 202.7100 |
| 3 | 14:52:27 | 103.08% | 210.7500 | 191.0200 | 196.7900 | 199.7300 | 204.9500 | 203.7500 | 212.1500 | 204.8500 |
| 4 | 14:53:07 | 104.11% | 207.1600 | 191.5700 | 192.8000 | 194.4200 | 202.4400 | 201.8400 | 215.4700 | 192.7500 |
| 5 | 14:53:47 | 104.24% | 203.8300 | 182.2500 | 186.5800 | 185.6400 | 202.9200 | 197.8200 | 203.2200 | 191.0600 |
| x | | 103.71% | 207.4300 | 187.5300 | 192.6300 | 196.0500 | 203.0200 | 201.8300 | 211.2500 | 198.8900 |
| %RSD | | 0.58 | 1.1906 | 2.1872 | 1.9929 | 3.2611 | 0.6171 | 1.2230 | 2.2139 | 3.2449 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 99.69% | 0.0081 | 196.6200 | 199.1400 | 277.4600 | 200.9800 | 203.0700 | 201.9200 | 201.2800 |
| 2 | 14:51:46 | 100.55% | 0.0079 | 198.4100 | 198.3400 | 283.4000 | 200.8700 | 198.1000 | 193.5200 | 199.2900 |
| 3 | 14:52:27 | 101.05% | -0.0018 | 199.5500 | 201.6900 | 280.5000 | 201.3900 | 201.6000 | 201.9300 | 202.6300 |
| 4 | 14:53:07 | 101.21% | 0.0030 | 198.5400 | 197.3900 | 285.1900 | 199.7000 | 197.4200 | 203.1900 | 198.9800 |
| 5 | 14:53:47 | 101.60% | 0.0157 | 193.4800 | 194.2500 | 272.4800 | 195.8300 | 193.4200 | 201.3700 | 192.8100 |
| x | | 100.82% | 0.0066 | 197.3200 | 198.1600 | 279.8000 | 199.7500 | 198.7200 | 200.3900 | 199.0000 |
| %RSD | | 0.73 | 98.4280 | 1.2116 | 1.3659 | 1.8008 | 1.1427 | 1.9054 | 1.9437 | 1.8942 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 205.3800 | 204.7100 | 204.6800 | 203.8200 | 198.5900 | 202.2700 | 202.0500 | -0.2312 | 98.03% |
| 2 | 14:51:46 | 206.9300 | 204.6000 | 202.5600 | 204.7900 | 198.5900 | 202.8400 | 202.1200 | -0.8303 | 98.28% |
| 3 | 14:52:27 | 206.2500 | 206.4300 | 207.7200 | 206.6900 | 198.5400 | 201.0000 | 203.3300 | -0.9208 | 99.08% |
| 4 | 14:53:07 | 204.0000 | 202.1000 | 203.3800 | 206.6100 | 197.4200 | 202.1000 | 196.8300 | 0.1968 | 97.72% |
| 5 | 14:53:47 | 199.0100 | 198.5600 | 197.3200 | 195.5900 | 192.1500 | 197.7300 | 196.4300 | -1.8144 | 97.50% |
| x | | 204.3100 | 203.2800 | 203.1300 | 203.5000 | 197.0600 | 201.1900 | 200.1500 | -0.7200 | 98.12% |
| %RSD | | 1.5459 | 1.5036 | 1.8698 | 2.2547 | 1.4155 | 1.0171 | 1.6278 | 106.0000 | 0.62 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.96% | 202.0200 | -3.3204 | 199.9700 |
| 2 | 14:51:46 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.95% | 204.7800 | 0.8236 | 204.7400 |
| 3 | 14:52:27 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.17% | 206.7400 | -4.8236 | 206.8400 |
| 4 | 14:53:07 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.61% | 210.4800 | -0.0234 | 210.7600 |
| 5 | 14:53:47 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.87% | 198.2200 | -0.2314 | 198.3200 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.51% | 204.4500 | -1.5150 | 204.1200 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.73 | 2.2737 | 160.1500 | 2.4824 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 195.9500 | 198.1800 | 0.0000 | 0.0000 | 189.3000 | 193.4500 | 201.6300 | 100.19% | 192.3400 |
| 2 | 14:51:46 | 199.4900 | 201.3000 | 0.0000 | 0.0000 | 192.9400 | 198.0400 | 203.1300 | 99.67% | 195.4700 |
| 3 | 14:52:27 | 198.3300 | 201.6000 | 0.0000 | 0.0000 | 194.1400 | 196.2000 | 201.4000 | 100.89% | 196.3300 |
| 4 | 14:53:07 | 198.0400 | 201.4500 | 0.0000 | 0.0000 | 191.6100 | 194.6000 | 202.1100 | 100.39% | 197.2000 |
| 5 | 14:53:47 | 192.0900 | 196.4600 | 0.0000 | 0.0000 | 188.7000 | 189.7200 | 195.3000 | 99.04% | 189.0800 |
| x | | 196.7800 | 199.8000 | 0.0000 | 0.0000 | 191.3400 | 194.4000 | 200.7100 | 100.03% | 194.0900 |
| %RSD | | 1.4838 | 1.1742 | 0.0000 | 0.0000 | 1.2155 | 1.6145 | 1.5433 | 0.71 | 1.7235 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:51:06 | 192.5500 | 200.1600 | 187.0800 | 191.7200 | 101.38% | -0.5330 |
| 2 | 14:51:46 | 195.3400 | 199.4000 | 189.2800 | 193.5200 | 101.03% | 1.4442 |
| 3 | 14:52:27 | 197.2800 | 201.3900 | 189.9900 | 195.0900 | 101.51% | -0.5330 |
| 4 | 14:53:07 | 196.3300 | 201.3900 | 190.2200 | 193.8000 | 101.33% | -0.5330 |
| 5 | 14:53:47 | 188.9100 | 194.2000 | 183.4200 | 188.2100 | 101.62% | -0.5330 |
| x | | 194.0800 | 199.3100 | 188.0000 | 192.4700 | 101.37% | -0.1376 |
| %RSD | | 1.7470 | 1.4941 | 1.5125 | 1.3845 | 0.22 | 642.6600 |

**S500** 06/17/2015 14:54:49

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 102.35% | 517.4900 | 465.2800 | 473.7900 | 474.5900 | 489.4900 | 507.6000 | 523.9000 | 478.1600 |
| 2 | 14:56:15 | 103.34% | 520.5600 | 470.4500 | 481.1600 | 485.3300 | 513.1600 | 512.4400 | 531.6200 | 500.7000 |
| 3 | 14:56:55 | 103.81% | 519.5800 | T487.7000 | 484.2100 | 483.8900 | 503.8700 | 513.2600 | 536.1400 | 499.6900 |
| 4 | 14:57:35 | 103.68% | 519.4100 | 478.8900 | 476.0700 | 479.8300 | 504.2900 | T504.8800 | 534.6200 | 504.6300 |
| 5 | 14:58:15 | 105.39% | 506.5800 | 458.8300 | 471.2400 | 476.4000 | 485.6700 | 495.0000 | 511.3500 | 482.7100 |
| x | | 103.71% | 516.7200 | T472.2300 | 477.2900 | 480.0100 | 499.2900 | T506.6400 | 527.5300 | 493.1800 |
| %RSD | | 1.06 | 1.1183 | T2.4022 | 1.1146 | 0.9653 | 2.2833 | T1.4537 | 1.9335 | 2.4102 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 98.68% | 0.0084 | 505.1900 | 502.2800 | 700.0800 | T504.4800 | 506.8200 | 488.0700 | T507.4000 |
| 2 | 14:56:15 | 98.51% | 0.0035 | 515.1300 | 511.9200 | 703.1000 | T511.8700 | 509.1300 | 492.7000 | T512.5300 |
| 3 | 14:56:55 | 98.65% | 0.0247 | 517.8600 | 517.1900 | 711.8000 | T514.0600 | 509.1600 | 503.6700 | T516.7000 |
| 4 | 14:57:35 | 99.51% | 0.0066 | T510.7900 | 508.8800 | 689.6700 | T511.6800 | 501.2700 | 498.1000 | T506.5300 |
| 5 | 14:58:15 | 99.52% | -0.0015 | 501.8700 | 497.6000 | 688.3600 | T495.8400 | 498.5800 | 499.1100 | T503.0200 |
| x | | 98.98% | 0.0083 | T510.1700 | 507.5800 | 698.6000 | T507.5800 | 504.9900 | 496.3300 | T509.2400 |
| %RSD | | 0.50 | 119.0900 | T1.3066 | 1.5277 | 1.3974 | T1.4768 | 0.9542 | 1.2180 | T1.0572 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 509.2600 | 513.9700 | 505.9800 | 509.6100 | 488.8600 | 490.9800 | 496.0800 | -0.0474 | 95.91% |
| 2 | 14:56:15 | 519.1900 | 518.2200 | 517.2700 | 516.7500 | 496.1000 | M501.2600 | 498.5200 | 0.0118 | 96.04% |
| 3 | 14:56:55 | 521.8600 | 525.5200 | 522.0400 | 519.0400 | 498.6300 | M506.4300 | M507.4500 | 0.6391 | 96.13% |
| 4 | 14:57:35 | 511.0500 | 522.5500 | 514.9300 | 514.5000 | 494.5800 | M507.4900 | M503.1500 | -2.5823 | 96.22% |
| 5 | 14:58:15 | 503.9200 | 507.9500 | 507.2600 | 501.5400 | 488.1500 | 491.7100 | 494.9100 | 0.8002 | 96.43% |
| x | | 513.0600 | 517.6400 | 513.4900 | 512.2900 | 493.2600 | M499.5800 | M500.0200 | -0.2357 | 96.14% |
| %RSD | | 1.4358 | 1.3449 | 1.3233 | 1.3565 | 0.9303 | M1.5765 | M1.0436 | 578.6500 | 0.21 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.20% | 489.0400 | 2.0701 | 488.3600 |
| 2 | 14:56:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.80% | M501.7800 | 0.1877 | M500.7500 |
| 3 | 14:56:55 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.26% | M504.9800 | -6.0980 | M506.6900 |
| 4 | 14:57:35 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.74% | M512.7100 | -6.4895 | M512.1100 |
| 5 | 14:58:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.00% | 482.8800 | -7.4321 | 484.1100 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.80% | M498.2800 | -3.5523 | M498.4000 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.36 | M2.4331 | 122.5100 | M2.3894 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 485.0300 | 491.7500 | 0.0000 | 0.0000 | 480.4700 | 482.0000 | 498.0800 | 98.39% | 489.4100 |
| 2 | 14:56:15 | 500.0800 | 505.1100 | 0.0000 | 0.0000 | 485.7800 | 489.8300 | 506.6800 | 97.82% | 501.3300 |
| 3 | 14:56:55 | 499.9700 | 509.9800 | 0.0000 | 0.0000 | 493.8000 | 494.4200 | 508.4200 | 97.70% | 504.1800 |
| 4 | 14:57:35 | 500.1000 | 510.3700 | 0.0000 | 0.0000 | 487.3900 | 486.7800 | 507.8400 | 97.53% | 499.9200 |
| 5 | 14:58:15 | 489.2000 | 495.3500 | 0.0000 | 0.0000 | 483.1400 | 476.1700 | 494.4900 | 97.93% | 481.2900 |
| x | | 494.8700 | 502.5100 | 0.0000 | 0.0000 | 486.1200 | 485.8400 | 503.1000 | 97.87% | 495.2300 |
| %RSD | | 1.4626 | 1.6992 | 0.0000 | 0.0000 | 1.0362 | 1.4501 | 1.2683 | 0.33 | 1.9356 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:55:29 | 501.5700 | 503.2600 | 474.8500 | 489.9100 | 99.24% | 0.1379 |
| 2 | 14:56:15 | T500.8800 | 508.6600 | 479.8200 | 493.8900 | 99.47% | -0.5330 |
| 3 | 14:56:55 | 516.3200 | 513.6900 | 485.0300 | 500.5200 | 99.16% | 1.4814 |
| 4 | 14:57:35 | T499.7400 | 509.3100 | 477.5800 | 493.8600 | 100.21% | -0.5330 |
| 5 | 14:58:15 | 496.2200 | 500.2200 | 469.3800 | 486.1100 | 100.04% | 0.1325 |
| x | | T502.9500 | 507.0300 | 477.3300 | 492.8600 | 99.63% | 0.1372 |
| %RSD | | T1.5422 | 1.0476 | 1.2170 | 1.0881 | 0.48 | 599.6200 |

**S2500** 06/17/2015 14:59:17

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | 99.43% | ↹2500.6000 | ↹2343.3000 | ↹2360.7000 | 2324.8000 | 2448.7000 | ↹2460.1000 | ↹2487.7000 | 2397.9000 |
| 2 | 15:00:37 | 98.87% | ↹2557.3000 | ↹2405.6000 | ↹2415.4000 | 2406.1000 | 2431.5000 | ↹2439.6000 | ↹2539.7000 | 2453.0000 |
| 3 | 15:01:18 | 98.83% | ↹2541.5000 | ↹2386.8000 | ↹2456.3000 | 2378.6000 | 2443.8000 | ↹2472.8000 | ↹2539.2000 | 2444.1000 |
| 4 | 15:01:58 | 98.56% | ↹2532.3000 | ↹2409.9000 | ↹2414.0000 | 2368.9000 | 2441.3000 | ↹2445.9000 | ↹2540.4000 | 2372.6000 |
| 5 | 15:02:38 | 98.11% | ↹2464.2000 | ↹2308.0000 | ↹2352.9000 | 2351.0000 | 2403.0000 | ↹2415.8000 | ↹2477.3000 | 2384.2000 |
| x | | 98.76% | ↹2519.2000 | ↹2370.7000 | ↹2399.9000 | 2365.9000 | 2433.7000 | ↹2446.8000 | ↹2516.9000 | 2410.4000 |
| %RSD | | 0.49 | ↹1.4711 | ↹1.8495 | ↹1.7877 | 1.2856 | 0.7495 | ↹0.8839 | ↹1.2554 | 1.4983 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | 91.70% | 0.0242 | ↹2480.2000 | ↹2492.7000 | 3492.5000 | ↹2518.8000 | ↹2526.6000 | 2461.0000 | ↹2514.5000 |
| 2 | 15:00:37 | 91.68% | 0.0084 | ↹2527.9000 | ↹2510.1000 | 3520.2000 | ↹2526.4000 | ↹2541.8000 | 2476.9000 | ↹2535.2000 |
| 3 | 15:01:18 | 92.07% | -0.0040 | ↹2534.0000 | ↹2538.4000 | 3506.5000 | ↹2548.0000 | ↹2566.3000 | 2514.7000 | ↹2551.9000 |
| 4 | 15:01:58 | 92.05% | -0.0005 | ↹2506.9000 | ↹2503.0000 | 3463.5000 | ↹2503.7000 | ↹2522.9000 | 2455.5000 | ↹2527.3000 |
| 5 | 15:02:38 | 91.55% | 0.0066 | ↹2496.8000 | ↹2475.6000 | 3415.5000 | ↹2491.9000 | ↹2515.9000 | 2463.0000 | ↹2485.3000 |
| x | | 91.81% | 0.0069 | ↹2509.1000 | ↹2504.0000 | 3479.7000 | ↹2517.8000 | ↹2534.7000 | 2474.2000 | ↹2522.8000 |
| %RSD | | 0.26 | 156.9200 | ↹0.8835 | ↹0.9262 | 1.1941 | ↹0.8548 | ↹0.7909 | 0.9683 | ↹0.9898 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | ↹2512.7000 | ↹2527.6000 | ↹2532.1000 | 2542.3000 | 2470.5000 | -0.6486 | 0.4660 | -0.1170 | 89.39% |
| 2 | 15:00:37 | ↹2535.0000 | ↹2536.1000 | ↹2526.1000 | 2569.4000 | 2497.7000 | -0.7340 | 0.6779 | -1.0710 | 88.35% |
| 3 | 15:01:18 | ↹2544.7000 | ↹2544.7000 | ↹2554.5000 | 2567.3000 | 2513.1000 | -1.1023 | 0.4692 | -0.1858 | 88.64% |
| 4 | 15:01:58 | ↹2524.4000 | ↹2527.3000 | ↹2520.1000 | 2556.9000 | 2491.5000 | -0.5589 | 0.4301 | -0.9273 | 89.06% |
| 5 | 15:02:38 | ↹2501.8000 | ↹2490.4000 | ↹2485.7000 | 2535.4000 | 2462.8000 | -0.6708 | 1.0932 | -1.9850 | 88.24% |
| x | | ↹2523.7000 | ↹2525.2000 | ↹2523.7000 | 2554.3000 | 2487.1000 | -0.7429 | 0.6273 | -0.8572 | 88.74% |
| %RSD | | ↹0.6775 | ↹0.8214 | ↹0.9871 | 0.5892 | 0.8228 | 28.3320 | 44.3460 | 88.8680 | 0.55 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 89.36% | 0.5844 | -11.8180 | 0.6348 |
| 2 | 15:00:37 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 89.03% | 0.6291 | -20.5120 | 0.6341 |
| 3 | 15:01:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 89.56% | 1.0018 | -30.9300 | 0.9962 |
| 4 | 15:01:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 88.95% | 1.3812 | -19.8540 | 1.3469 |
| 5 | 15:02:38 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 88.45% | 0.5919 | -23.9110 | 0.6256 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 89.07% | 0.8377 | -21.4050 | 0.8475 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.48 | 41.8040 | 32.3780 | 37.8460 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | 2474.9000 | ↹2493.3000 | 0.0000 | 0.0000 | ↹2486.5000 | 2394.5000 | 2521.9000 | 92.13% | ↹2467.8000 |
| 2 | 15:00:37 | 2503.2000 | ↹2507.3000 | 0.0000 | 0.0000 | ↹2512.8000 | 2409.6000 | 2521.9000 | 91.53% | ↹2488.2000 |
| 3 | 15:01:18 | 2512.1000 | ↹2527.9000 | 0.0000 | 0.0000 | ↹2516.4000 | 2417.0000 | 2546.2000 | 92.63% | ↹2532.4000 |
| 4 | 15:01:58 | 2501.9000 | ↹2524.2000 | 0.0000 | 0.0000 | ↹2510.9000 | 2410.0000 | 2524.2000 | 92.13% | ↹2500.6000 |
| 5 | 15:02:38 | 2468.4000 | ↹2481.8000 | 0.0000 | 0.0000 | ↹2460.0000 | 2364.4000 | 2484.4000 | 92.76% | ↹2402.5000 |
| x | | 2492.1000 | ↹2506.9000 | 0.0000 | 0.0000 | ↹2497.3000 | 2399.1000 | 2519.7000 | 92.24% | ↹2478.3000 |
| %RSD | | 0.7706 | ↹0.7867 | 0.0000 | 0.0000 | ↹0.9595 | 0.8783 | 0.8838 | 0.53 | ↹1.9538 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 14:59:57 | ↹2465.5000 | ↹2459.6000 | ↹2487.7000 | ↹2470.7000 | 93.62% | 0.8895 |
| 2 | 15:00:37 | ↹2500.9000 | ↹2478.6000 | ↹2497.1000 | ↹2485.7000 | 93.75% | -0.5330 |
| 3 | 15:01:18 | ↹2532.5000 | ↹2519.4000 | ↹2558.3000 | ↹2539.4000 | 92.66% | 0.1856 |
| 4 | 15:01:58 | ↹2495.6000 | ↹2478.3000 | ↹2494.5000 | ↹2487.0000 | 93.94% | 0.8846 |
| 5 | 15:02:38 | ↹2417.2000 | ↹2426.2000 | ↹2449.6000 | ↹2438.5000 | 94.42% | 0.8774 |
| x | | ↹2482.4000 | ↹2472.4000 | ↹2497.5000 | ↹2484.3000 | 93.68% | 0.4608 |
| %RSD | | ↹1.7506 | ↹1.3687 | ↹1.5635 | ↹1.4684 | 0.69 | 137.2700 |

**S5000** 06/17/2015 15:03:40

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | 97.74% | T 4898.1000 | T 4642.6000 | T 4709.4000 | 4606.9000 | 4741.6000 | T 4795.4000 | T 4929.0000 | 4778.9000 |
| 2 | 15:05:00 | 97.57% | TM 5030.1000 | T 4764.2000 | T 4805.9000 | 4714.3000 | 4793.6000 | T 4904.5000 | T 4999.2000 | 4814.4000 |
| 3 | 15:05:41 | 98.15% | TM 5051.7000 | T 4819.9000 | T 4857.0000 | 4762.0000 | 4888.0000 | T 4933.2000 | T 5029.6000 | 4850.2000 |
| 4 | 15:06:21 | 98.20% | TM 5024.8000 | T 4766.9000 | T 4773.6000 | 4699.1000 | 4819.4000 | T 4870.6000 | T 4967.1000 | 4778.6000 |
| 5 | 15:07:01 | 98.72% | T 4937.4000 | T 4709.9000 | T 4772.4000 | 4669.2000 | 4740.8000 | T 4827.9000 | T 4844.7000 | 4747.0000 |
| X | | 98.08% | TM 4988.4000 | T 4740.7000 | T 4783.7000 | 4690.3000 | 4796.7000 | T 4866.3000 | T 4953.9000 | 4793.8000 |
| %RSD | | 0.46 | TM 1.3382 | T 1.4182 | T 1.1263 | 1.2243 | 1.2782 | T 1.1462 | T 1.4453 | 0.8253 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | 90.14% | 0.0088 | T 4990.9000 | T 4950.1000 | 6937.0000 | T 4931.0000 | T 4984.3000 | 4838.2000 | T 4909.0000 |
| 2 | 15:05:00 | 91.50% | 0.0120 | T 4972.4000 | T 4984.9000 | 6955.4000 | T 4961.7000 | T 4967.1000 | 4828.2000 | T 4978.3000 |
| 3 | 15:05:41 | 91.99% | 0.0066 | TM 5058.4000 | TM 5061.4000 | 7108.8000 | TM 5112.6000 | T 5110.2000 | 4948.3000 | TM 5119.8000 |
| 4 | 15:06:21 | 92.19% | 0.0100 | T 4954.0000 | TM 5007.3000 | 7036.0000 | TM 5009.2000 | T 5045.0000 | 4869.1000 | TM 5004.3000 |
| 5 | 15:07:01 | 92.27% | 0.0240 | T 4996.9000 | T 4983.1000 | 6982.3000 | T 4937.4000 | T 5020.6000 | 4863.2000 | T 4927.2000 |
| X | | 91.62% | 0.0123 | TM 4994.5000 | TM 4997.4000 | 7003.9000 | TM 4990.4000 | T 5025.4000 | 4869.4000 | TM 4987.7000 |
| %RSD | | 0.96 | 55.8790 | TM 0.7903 | TM 0.8243 | 0.9927 | TM 1.5008 | T 1.1208 | 0.9701 | TM 1.6678 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | T 4954.3000 | T 4950.8000 | T 4936.2000 | T 4939.4000 | T 4980.1000 | -0.2453 | 0.8891 | 0.5913 | 85.91% |
| 2 | 15:05:00 | T 4963.6000 | T 4982.5000 | T 4947.0000 | T 4959.1000 | T 4996.8000 | -0.5756 | 0.8171 | 0.7613 | 87.38% |
| 3 | 15:05:41 | TM 5113.9000 | TM 5087.0000 | TM 5095.0000 | TM 5049.2000 | TM 5056.5000 | -0.5518 | 0.7771 | 0.4151 | 87.57% |
| 4 | 15:06:21 | T 4977.0000 | TM 5001.4000 | TM 5022.4000 | T 4980.2000 | TM 5037.9000 | -0.7218 | 0.6219 | 0.6500 | 88.12% |
| 5 | 15:07:01 | T 4924.5000 | T 4905.8000 | T 4933.0000 | T 4929.7000 | T 4965.0000 | -0.2833 | 0.6047 | 0.7652 | 87.83% |
| X | | TM 4986.7000 | TM 4985.5000 | TM 4986.7000 | TM 4971.5000 | TM 5007.3000 | -0.4756 | 0.7420 | 0.6366 | 87.36% |
| %RSD | | TM 1.4783 | TM 1.3502 | TM 1.4185 | TM 0.9568 | TM 0.7735 | 42.8950 | 16.7470 | 22.6800 | 0.98 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 86.19% | 0.3258 | -25.2570 | 0.3476 |
| 2 | 15:05:00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 86.81% | 0.4511 | -51.1370 | 0.5289 |
| 3 | 15:05:41 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 88.01% | 0.9317 | -22.4080 | 0.9885 |
| 4 | 15:06:21 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 87.24% | 1.5248 | -25.9710 | 1.4456 |
| 5 | 15:07:01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 87.76% | 0.4903 | -19.9290 | 0.4951 |
| X | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 87.20% | 0.7447 | -28.9400 | 0.7612 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.84 | 66.1170 | 43.6720 | 59.3380 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | T 4813.2000 | T 4958.8000 | 0.0000 | 0.0000 | T 4952.1000 | TM 5019.6000 | T 4944.2000 | 88.27% | TM 5032.6000 |
| 2 | 15:05:00 | 5130.8000 | T 5036.5000 | 0.0000 | 0.0000 | TM 5046.2000 | TM 5058.2000 | T 4982.4000 | 89.34% | TM 5023.4000 |
| 3 | 15:05:41 | 5138.0000 | T 5017.9000 | 0.0000 | 0.0000 | TM 5033.7000 | TM 5071.7000 | TM 5039.1000 | 90.35% | TM 5067.6000 |
| 4 | 15:06:21 | 5134.9000 | T 5031.1000 | 0.0000 | 0.0000 | TM 5029.7000 | TM 5125.2000 | TM 5050.8000 | 89.31% | TM 5029.4000 |
| 5 | 15:07:01 | T 4806.1000 | T 4937.3000 | 0.0000 | 0.0000 | T 4953.9000 | T 4985.9000 | T 4932.5000 | 90.03% | T 4904.8000 |
| X | | T 5004.6000 | T 4996.3000 | 0.0000 | 0.0000 | TM 5003.1000 | TM 5052.1000 | TM 4989.8000 | 89.46% | TM 5011.6000 |
| %RSD | | T 3.5566 | T 0.9051 | 0.0000 | 0.0000 | TM 0.9227 | TM 1.0476 | TM 1.0784 | 0.90 | TM 1.2400 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:04:20 | T 5012.3000 | T 5021.3000 | T 4996.3000 | T 5003.4000 | 88.45% | 2.4782 |
| 2 | 15:05:00 | T 5031.6000 | T 5011.6000 | T 5028.4000 | T 5016.4000 | 90.80% | 1.6670 |
| 3 | 15:05:41 | T 5034.8000 | T 5065.6000 | T 5063.2000 | T 5074.2000 | 91.01% | 3.8566 |
| 4 | 15:06:21 | T 5058.0000 | T 5017.7000 | T 5003.2000 | T 5021.4000 | 90.81% | 3.8664 |
| 5 | 15:07:01 | T 4907.2000 | T 4949.4000 | T 4929.2000 | T 4929.1000 | 90.92% | 1.6641 |
| X | | T 5008.8000 | T 5013.1000 | T 5004.0000 | T 5008.9000 | 90.40% | 2.7065 |
| %RSD | | T 1.1793 | T 0.8289 | T 0.9868 | T 1.0406 | 1.21 | 40.8420 |

**S50000** 06/17/2015 15:08:03

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 92.47% | 1.7240 | ↹47898.0000 | ↹48919.0000 | ↹49627.0000 | ↹49800.0000 | ↹49801.0000 | ↹51047.0000 | 50142.0000 |
| 2 | 15:09:24 | 93.40% | 1.0939 | ↹49064.0000 | ↹49093.0000 | ↹49815.0000 | ↹49752.0000 | ↹49682.0000 | ↹51285.0000 | 50984.0000 |
| 3 | 15:10:04 | 93.91% | 0.6955 | ↹49301.0000 | ↹49842.0000 | ↹50125.0000 | ↹50886.0000 | ↹50528.0000 | ↹51892.0000 | 50882.0000 |
| 4 | 15:10:44 | 93.85% | 0.5254 | ↹49973.0000 | ↹50126.0000 | ↹50229.0000 | ↹50408.0000 | ↹50049.0000 | ↹51538.0000 | 51001.0000 |
| 5 | 15:11:24 | 94.99% | 0.4098 | ↹47888.0000 | ↹48290.0000 | ↹48733.0000 | ↹48773.0000 | ↹48644.0000 | ↹49525.0000 | 49034.0000 |
| x | | 93.72% | 0.8897 | ↹48825.0000 | ↹49254.0000 | ↹49706.0000 | ↹49924.0000 | ↹49741.0000 | ↹51057.0000 | 50409.0000 |
| %RSD | | 0.97 | 59.9650 | ↹1.8713 | ↹1.4968 | ↹1.1961 | ↹1.5927 | ↹1.3945 | ↹1.7862 | 1.6795 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 86.98% | 0.0078 | 1.3942 | 1.4268 | ↹50836.0000 | 2.4346 | ↹51409.0000 | 51052.0000 | 1.6756 |
| 2 | 15:09:24 | 89.56% | 0.0252 | 0.7233 | 0.8399 | ↹50445.0000 | 1.8525 | ↹51514.0000 | 51445.0000 | 1.1459 |
| 3 | 15:10:04 | 90.89% | 0.0246 | 0.4644 | 0.5461 | ↹51919.0000 | 1.5911 | ↹51388.0000 | 51266.0000 | 0.8733 |
| 4 | 15:10:44 | 92.32% | 0.0240 | 0.3090 | 0.4048 | ↹50756.0000 | 1.3792 | ↹50938.0000 | 50447.0000 | 0.7302 |
| 5 | 15:11:24 | 93.38% | 0.0218 | 0.2276 | 0.2837 | ↹49071.0000 | 1.2713 | ↹49348.0000 | 49190.0000 | 0.5711 |
| x | | 90.63% | 0.0207 | 0.6237 | 0.7003 | ↹50605.0000 | 1.7058 | ↹50919.0000 | 50680.0000 | 0.9992 |
| %RSD | | 2.76 | 35.4610 | 75.4100 | 65.1270 | ↹2.0206 | 27.2040 | ↹1.7785 | 1.8039 | 43.3510 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 2.2004 | 2.1669 | 1.9680 | 2.2963 | 1.7598 | -0.8726 | 0.1208 | 0.1388 | 83.73% |
| 2 | 15:09:24 | 1.7263 | 1.6403 | 1.7443 | 1.1931 | 1.0662 | -0.0200 | 0.1777 | -0.5198 | 84.70% |
| 3 | 15:10:04 | 1.4321 | 1.3144 | 1.2168 | 1.0304 | 0.9798 | -0.0344 | 0.5580 | -0.4282 | 86.34% |
| 4 | 15:10:44 | 1.1569 | 1.1708 | 0.9390 | 0.9205 | 0.6011 | 0.4457 | -0.2271 | -0.6206 | 87.07% |
| 5 | 15:11:24 | 1.0816 | 0.9603 | 0.8814 | 0.5914 | 0.3577 | 0.9367 | -0.3193 | 1.4123 | 88.04% |
| x | | 1.5195 | 1.4505 | 1.3499 | 1.2063 | 0.9529 | 0.0911 | 0.0620 | -0.0035 | 85.97% |
| %RSD | | 30.1100 | 32.4520 | 35.9800 | 53.7090 | 56.0850 | 736.0000 | 565.3600 | 24284.0000 | 2.04 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 80.89% | 0.1936 | -0.7056 | 0.1865 |
| 2 | 15:09:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.95% | 0.2525 | -0.3352 | 0.2723 |
| 3 | 15:10:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 83.42% | 0.4580 | -0.5384 | 0.5009 |
| 4 | 15:10:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 84.58% | 0.6505 | -1.0727 | 0.6532 |
| 5 | 15:11:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 84.88% | 0.2174 | -0.9020 | 0.2317 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 83.34% | 0.3544 | -0.7108 | 0.3690 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.90 | 55.2620 | 40.9170 | 54.1540 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 1.3866 | 1.4441 | 0.0000 | 0.0000 | 3.0668 | 1.3946 | 1.4814 | 86.49% | 1.9943 |
| 2 | 15:09:24 | 0.8111 | 0.8434 | 0.0000 | 0.0000 | 1.9902 | 0.8392 | 0.8648 | 87.70% | 1.2126 |
| 3 | 15:10:04 | 0.4869 | 0.5675 | 0.0000 | 0.0000 | 1.4238 | 0.4955 | 0.6714 | 88.22% | 0.8522 |
| 4 | 15:10:44 | 0.3409 | 0.4479 | 0.0000 | 0.0000 | 1.1763 | 0.4115 | 0.4374 | 88.66% | 0.5996 |
| 5 | 15:11:24 | 0.3197 | 0.3355 | 0.0000 | 0.0000 | 1.0098 | 0.2586 | 0.2480 | 89.95% | 0.4838 |
| x | | 0.6690 | 0.7277 | 0.0000 | 0.0000 | 1.7334 | 0.6799 | 0.7406 | 88.20% | 1.0285 |
| %RSD | | 66.7590 | 60.8590 | 0.0000 | 0.0000 | 48.0410 | 66.5890 | 64.1770 | 1.44 | 59.1100 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:08:43 | 1.9330 | 1.6714 | 1.6755 | 1.6447 | 83.32% | -0.5330 |
| 2 | 15:09:24 | 1.2519 | 1.0327 | 1.0574 | 1.0177 | 84.10% | 0.2587 |
| 3 | 15:10:04 | 0.8026 | 0.7039 | 0.7238 | 0.7046 | 85.12% | 0.2492 |
| 4 | 15:10:44 | 0.6262 | 0.5612 | 0.5591 | 0.5569 | 85.33% | -0.5330 |
| 5 | 15:11:24 | 0.4635 | 0.4374 | 0.4573 | 0.4166 | 86.39% | -0.5330 |
| x | | 1.0155 | 0.8813 | 0.8946 | 0.8681 | 84.85% | -0.2182 |
| %RSD | | 58.2460 | 56.1100 | 55.0240 | 56.2250 | 1.39 | 197.5300 |

**S100000** 06/17/2015 15:12:26

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 88.63% | 0.2292 | TM 100050.0000 | T 99823.0000 | TM 100010.0000 | TM 100380.0000 | TM 100950.0000 | T 99620.0000 | TM 100470.0000 |
| 2 | 15:13:47 | 89.55% | 0.2434 | TM 100400.0000 | TM 101190.0000 | T 99933.0000 | TM 100560.0000 | TM 100100.0000 | T 99621.0000 | T 99804.0000 |
| 3 | 15:14:27 | 89.11% | 0.1664 | TM 100730.0000 | TM 101250.0000 | TM 101570.0000 | TM 101140.0000 | TM 101310.0000 | TM 100400.0000 | TM 100840.0000 |
| 4 | 15:15:07 | 90.44% | 0.1433 | TM 101310.0000 | TM 100170.0000 | T 99644.0000 | T 99393.0000 | T 99204.0000 | T 99631.0000 | T 99750.0000 |
| 5 | 15:15:48 | 90.21% | 0.1221 | TM 100540.0000 | T 99485.0000 | T 99674.0000 | T 98767.0000 | T 99134.0000 | T 98095.0000 | T 98173.0000 |
| x | | 89.59% | 0.1809 | TM 100600.0000 | TM 100380.0000 | TM 100170.0000 | TM 100050.0000 | TM 100140.0000 | TM 99473.0000 | TM 99808.0000 |
| %RSD | | 0.84 | 29.4170 | TM 0.4613 | TM 0.7986 | TM 0.8004 | TM 0.9543 | TM 0.9859 | TM 0.8447 | TM 1.0251 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 89.22% | 0.0417 | -0.0814 | 0.2521 | TM 100740.0000 | 2.2551 | TM 101620.0000 | TM 101190.0000 | 0.8653 |
| 2 | 15:13:47 | 90.72% | 0.0265 | -0.1038 | 0.1617 | T 99717.0000 | 2.2062 | T 99626.0000 | T 99780.0000 | 0.8575 |
| 3 | 15:14:27 | 91.88% | 0.0295 | -0.0610 | 0.2195 | TM 100800.0000 | 2.2298 | TM 100070.0000 | TM 100750.0000 | 0.8206 |
| 4 | 15:15:07 | 92.81% | 0.0413 | -0.2153 | 0.1512 | T 98491.0000 | 2.0371 | T 98711.0000 | T 98718.0000 | 0.7499 |
| 5 | 15:15:48 | 93.79% | 0.0148 | -0.1645 | 0.1341 | T 98109.0000 | 2.1098 | T 97662.0000 | T 97891.0000 | 0.7126 |
| x | | 91.68% | 0.0307 | -0.1252 | 0.1837 | TM 99572.0000 | 2.1676 | TM 99538.0000 | TM 99667.0000 | 0.8012 |
| %RSD | | 1.94 | 36.5020 | 50.7720 | 27.1570 | TM 1.2502 | 4.2149 | TM 1.4922 | TM 1.3813 | 8.4053 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 1.9525 | 1.3049 | 1.2412 | 0.9288 | 0.2927 | 1.3792 | -0.4191 | 2.6586 | 82.45% |
| 2 | 15:13:47 | 1.7333 | 1.2448 | 1.1775 | 0.7867 | 0.1599 | 1.3951 | -0.7967 | 2.2988 | 85.04% |
| 3 | 15:14:27 | 1.8340 | 1.2688 | 1.1464 | 0.6056 | 0.1195 | 1.9302 | -0.5666 | 1.1157 | 84.19% |
| 4 | 15:15:07 | 1.8562 | 1.1553 | 1.2090 | 0.7548 | 0.1264 | 2.0871 | -0.4799 | 2.4411 | 85.90% |
| 5 | 15:15:48 | 1.6593 | 1.1483 | 1.3734 | 0.7199 | 0.1920 | 2.4806 | -0.3443 | 1.1454 | 85.98% |
| x | | 1.8070 | 1.2244 | 1.2295 | 0.7591 | 0.1781 | 1.8544 | -0.5213 | 1.9319 | 84.71% |
| %RSD | | 6.2832 | 5.6923 | 7.1446 | 15.4010 | 39.4620 | 25.4190 | 33.4140 | 38.4460 | 1.72 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 79.02% | 0.1953 | -0.5631 | 0.1923 |
| 2 | 15:13:47 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 80.83% | 0.2620 | -1.3294 | 0.2491 |
| 3 | 15:14:27 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 81.61% | 0.3696 | -1.0678 | 0.3536 |
| 4 | 15:15:07 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 81.80% | 0.4436 | -0.9035 | 0.4744 |
| 5 | 15:15:48 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.39% | 0.1732 | -0.6812 | 0.1723 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 81.13% | 0.2887 | -0.9090 | 0.2883 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.61 | 39.9880 | 33.6190 | 43.5550 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 0.1956 | 0.1537 | 0.0000 | 0.0000 | 0.6702 | 0.2054 | 0.2418 | 82.92% | 0.3161 |
| 2 | 15:13:47 | 0.1830 | 0.1379 | 0.0000 | 0.0000 | 0.6126 | 0.1450 | 0.2688 | 84.67% | 0.2360 |
| 3 | 15:14:27 | 0.1318 | 0.1114 | 0.0000 | 0.0000 | 0.5689 | 0.1621 | 0.2074 | 85.16% | 0.1712 |
| 4 | 15:15:07 | 0.0981 | 0.0879 | 0.0000 | 0.0000 | 0.5012 | 0.0698 | 0.0881 | 85.94% | 0.1396 |
| 5 | 15:15:48 | 0.0596 | 0.0668 | 0.0000 | 0.0000 | 0.4416 | 0.0786 | 0.0772 | 85.88% | 0.1439 |
| x | | 0.1336 | 0.1115 | 0.0000 | 0.0000 | 0.5589 | 0.1322 | 0.1766 | 84.91% | 0.2014 |
| %RSD | | 42.6940 | 31.8140 | 0.0000 | 0.0000 | 16.1140 | 43.4290 | 50.1500 | 1.45 | 37.1530 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:13:07 | 0.3491 | 0.3437 | 0.3557 | 0.3502 | 78.01% | 1.1740 |
| 2 | 15:13:47 | 0.2363 | 0.3194 | 0.2709 | 0.2880 | 79.55% | 0.3040 |
| 3 | 15:14:27 | 0.1998 | 0.2533 | 0.2284 | 0.2568 | 80.13% | 1.1289 |
| 4 | 15:15:07 | 0.1500 | 0.2373 | 0.1968 | 0.2244 | 79.68% | 0.3027 |
| 5 | 15:15:48 | 0.1189 | 0.2198 | 0.2103 | 0.2080 | 80.40% | 0.2952 |
| x | | 0.2108 | 0.2747 | 0.2524 | 0.2655 | 79.55% | 0.6409 |
| %RSD | | 42.4420 | 19.6310 | 25.4050 | 21.2660 | 1.16 | 72.7520 |

**ICV1** 06/17/2015 15:16:50

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 102.51% | 104.4600 | T2000.0000 | 1196.7000 | 1160.8000 | 1195.8000 | T534.9900 | T2026.3000 | 1974.4000 |
| 2 | 15:18:10 | 102.85% | 105.1200 | T1996.4000 | 1173.5000 | 1163.8000 | 1184.5000 | 524.2000 | T2014.0000 | 1963.9000 |
| 3 | 15:18:51 | 103.36% | 103.9500 | T1992.8000 | 1201.7000 | 1189.2000 | 1190.4000 | 531.5400 | T2053.6000 | 1987.9000 |
| 4 | 15:19:31 | 104.59% | 102.7000 | T1967.3000 | 1174.1000 | 1146.0000 | 1173.7000 | 515.0200 | T2017.4000 | 1976.4000 |
| 5 | 15:20:11 | 103.47% | 102.8800 | T1956.9000 | 1163.1000 | 1136.9000 | 1153.4000 | T511.8900 | T1963.5000 | 1938.4000 |
| x | | 103.36% | 103.8200 | T1982.7000 | 1181.8000 | 1159.4000 | 1179.5000 | T523.5300 | T2015.0000 | 1968.2000 |
| %RSD | | 0.77 | 0.9932 | T0.9740 | 1.4015 | 1.7212 | 1.4205 | T1.9192 | T1.6224 | 0.9512 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 99.73% | 0.0146 | 98.8270 | 96.8890 | 1033.6000 | 97.4920 | 1048.8000 | 1016.8000 | 99.3520 |
| 2 | 15:18:10 | 102.35% | 0.0171 | 98.0260 | 96.1590 | 1024.6000 | 96.0350 | 1026.8000 | 983.9600 | 98.5400 |
| 3 | 15:18:51 | 101.65% | 0.0173 | 99.3120 | 97.4220 | 1022.6000 | 96.9600 | 1032.7000 | 999.0400 | 99.4390 |
| 4 | 15:19:31 | 102.09% | 0.0029 | 98.2920 | 96.0840 | 1024.7000 | 96.5430 | 1029.7000 | 993.1200 | 99.1340 |
| 5 | 15:20:11 | 102.12% | 0.0187 | 96.7080 | 95.8280 | 1006.2000 | 95.1880 | 1010.1000 | 989.1100 | 97.7940 |
| x | | 101.59% | 0.0141 | 98.2330 | 96.4760 | 1022.3000 | 96.4440 | 1029.6000 | 996.4100 | 98.8520 |
| %RSD | | 1.05 | 45.6620 | 1.0037 | 0.6836 | 0.9766 | 0.9157 | 1.3457 | 1.2717 | 0.6954 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 103.3400 | 102.5100 | 104.4400 | 206.3400 | 200.8700 | 208.3700 | 204.0700 | -0.8921 | 94.98% |
| 2 | 15:18:10 | 102.7500 | 101.9300 | 103.8800 | 204.4600 | 198.6900 | 203.9900 | 200.0400 | -1.6790 | 96.01% |
| 3 | 15:18:51 | 103.2300 | 102.1800 | 101.8700 | 210.7800 | 199.9100 | 206.5200 | 204.2900 | -1.5994 | 96.02% |
| 4 | 15:19:31 | 102.2600 | 101.8000 | 104.1300 | 207.2100 | 199.3000 | 204.9700 | 202.7500 | -0.4835 | 96.78% |
| 5 | 15:20:11 | 100.0700 | 100.2900 | 100.7700 | 206.5000 | 197.5100 | 200.9900 | 201.4700 | -0.4363 | 96.34% |
| x | | 102.3300 | 101.7400 | 103.0200 | 207.0600 | 199.2600 | 204.9700 | 202.5300 | -1.0181 | 96.03% |
| %RSD | | 1.3041 | 0.8406 | 1.5645 | 1.1179 | 0.6354 | 1.3531 | 0.8842 | 58.4190 | 0.69 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.61% | 100.6400 | -0.8234 | 99.6380 |
| 2 | 15:18:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.78% | 101.9400 | 0.6462 | 101.8600 |
| 3 | 15:18:51 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.94% | 100.5000 | -2.0766 | 101.9400 |
| 4 | 15:19:31 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.85% | 102.5500 | -2.2446 | 102.8000 |
| 5 | 15:20:11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.02% | 99.0520 | -0.3762 | 98.6080 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.44% | 100.9400 | -0.9749 | 100.9700 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.71 | 1.3509 | 123.8900 | 1.7462 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 98.1380 | 97.7690 | 0.0000 | 0.0000 | 186.2500 | 96.6730 | 100.1800 | 95.09% | 198.3300 |
| 2 | 15:18:10 | 97.3550 | 100.1800 | 0.0000 | 0.0000 | 186.9200 | 96.6620 | 101.9400 | 95.39% | 200.2500 |
| 3 | 15:18:51 | 97.8160 | 99.1830 | 0.0000 | 0.0000 | 188.6200 | 97.6150 | 101.8300 | 95.51% | 200.7800 |
| 4 | 15:19:31 | 97.8200 | 99.6130 | 0.0000 | 0.0000 | 186.2000 | 97.6110 | 101.1200 | 97.37% | 199.6000 |
| 5 | 15:20:11 | 96.5280 | 98.0850 | 0.0000 | 0.0000 | 183.1600 | 95.3460 | 97.6200 | 97.63% | 195.4900 |
| x | | 97.5320 | 98.9650 | 0.0000 | 0.0000 | 186.2300 | 96.7810 | 100.5400 | 96.20% | 198.8900 |
| %RSD | | 0.6423 | 1.0285 | 0.0000 | 0.0000 | 1.0609 | 0.9620 | 1.7649 | 1.25 | 1.0594 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:17:30 | 199.2500 | 197.9200 | 195.2600 | 195.7200 | 96.00% | 0.1605 |
| 2 | 15:18:10 | 198.6100 | 198.7800 | 195.7600 | 195.3600 | 97.49% | -0.5330 |
| 3 | 15:18:51 | 200.5800 | 200.1900 | 195.2800 | 196.3600 | 97.55% | 0.1496 |
| 4 | 15:19:31 | 200.5900 | 198.1600 | 195.3500 | 195.6700 | 98.41% | 0.1436 |
| 5 | 15:20:11 | 196.0300 | 195.4500 | 191.3600 | 192.3600 | 98.44% | 0.1434 |
| x | | 199.0100 | 198.1000 | 194.6100 | 195.1000 | 97.58% | 0.0128 |
| %RSD | | 0.9417 | 0.8701 | 0.9367 | 0.8049 | 1.02 | 2384.5000 |

**ICB1** 06/17/2015 15:21:17

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 104.04% | 0.0792 | 5.5272 | 4.2614 | 4.3433 | 3.3911 | 3.2863 | 5.1836 | 0.1846 |
| 2 | 15:22:37 | 104.37% | 0.0761 | 5.5481 | 4.6670 | 4.8270 | 4.0396 | 3.6739 | 4.4910 | -0.1960 |
| 3 | 15:23:18 | 104.77% | 0.0637 | 4.8714 | 4.5304 | 5.1538 | 4.9870 | 3.6899 | 3.4558 | -0.8747 |
| 4 | 15:23:58 | 105.70% | 0.0759 | 4.7009 | 4.1311 | 3.9303 | 4.3547 | 3.6022 | 2.6683 | 0.9968 |
| 5 | 15:24:39 | 105.93% | 0.0941 | 3.6802 | 4.0098 | 3.7693 | 4.1525 | 3.0621 | 0.9737 | -1.6623 |
| x | | 104.96% | 0.0778 | 4.8656 | 4.3199 | 4.4048 | 4.1850 | 3.4629 | 3.3545 | -0.3103 |
| %RSD | | 0.79 | 13.9810 | 15.7060 | 6.3397 | 13.2960 | 13.7500 | 8.0042 | 48.9540 | 326.7600 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 100.63% | 0.0015 | 0.1096 | 0.0163 | 2.6561 | 0.0418 | -6.6673 | 4.1464 | 0.0418 |
| 2 | 15:22:37 | 101.97% | -0.0082 | 0.0722 | -0.0387 | 2.4723 | 0.0380 | -5.0334 | 9.5177 | 0.0515 |
| 3 | 15:23:18 | 101.77% | -0.0066 | 0.1532 | 0.0096 | 4.9446 | 0.0465 | -3.9855 | 7.6554 | 0.0414 |
| 4 | 15:23:58 | 102.77% | 0.0028 | 0.1182 | 0.0205 | 2.3155 | 0.0558 | -5.0843 | 3.8774 | 0.0485 |
| 5 | 15:24:39 | 103.57% | -0.0036 | 0.1190 | -0.0035 | -1.2110 | 0.0481 | -5.1447 | 5.8153 | 0.0469 |
| x | | 102.14% | -0.0028 | 0.1145 | 0.0008 | 2.2355 | 0.0460 | -5.1830 | 6.2024 | 0.0460 |
| %RSD | | 1.08 | 172.1200 | 25.2760 | 2916.0000 | 98.6580 | 14.6480 | 18.4820 | 38.5640 | 9.4544 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 0.0115 | 0.2543 | 0.1509 | -0.0317 | 0.0805 | 1.0298 | 0.1030 | 0.7228 | 95.74% |
| 2 | 15:22:37 | -0.0080 | 0.1850 | 0.1861 | -0.0114 | 0.1339 | 1.3081 | 0.0855 | 0.1195 | 95.84% |
| 3 | 15:23:18 | 0.0298 | 0.1769 | 0.2371 | 0.0610 | -0.0331 | 1.3209 | -0.7061 | 1.7573 | 96.38% |
| 4 | 15:23:58 | 0.0129 | 0.2131 | 0.0725 | 0.0092 | 0.1537 | 0.4040 | 0.1857 | 0.1869 | 97.58% |
| 5 | 15:24:39 | 0.0258 | 0.1829 | 0.0713 | 0.0376 | 0.0868 | 0.8357 | 0.0331 | -1.8863 | 97.96% |
| x | | 0.0144 | 0.2024 | 0.1436 | 0.0129 | 0.0844 | 0.9797 | -0.0597 | 0.1801 | 96.70% |
| %RSD | | 102.8400 | 15.8860 | 50.3320 | 287.0200 | 86.0360 | 38.8310 | 611.7900 | 737.6300 | 1.05 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.89% | 0.1371 | -0.2923 | 0.1352 |
| 2 | 15:22:37 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.67% | 0.1272 | 0.0380 | 0.1360 |
| 3 | 15:23:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.73% | 0.2088 | -0.5812 | 0.1725 |
| 4 | 15:23:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.92% | 0.2055 | -0.3608 | 0.1761 |
| 5 | 15:24:39 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.47% | 0.0496 | -0.5494 | 0.0545 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.13% | 0.1456 | -0.3491 | 0.1349 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.07 | 45.0430 | 71.2080 | 36.2730 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 0.0646 | 0.0420 | 0.0000 | 0.0000 | 0.9556 | 0.0508 | 0.0377 | 95.42% | 0.1289 |
| 2 | 15:22:37 | 0.0342 | 0.0339 | 0.0000 | 0.0000 | 0.6728 | 0.0582 | 0.0607 | 96.03% | 0.1062 |
| 3 | 15:23:18 | 0.0652 | 0.0614 | 0.0000 | 0.0000 | 0.5292 | 0.0423 | 0.0279 | 95.95% | 0.0794 |
| 4 | 15:23:58 | 0.0581 | 0.0335 | 0.0000 | 0.0000 | 0.4323 | 0.0413 | 0.0272 | 97.63% | 0.0632 |
| 5 | 15:24:39 | 0.0651 | 0.0505 | 0.0000 | 0.0000 | 0.3797 | 0.0332 | 0.0086 | 98.18% | 0.0790 |
| x | | 0.0574 | 0.0443 | 0.0000 | 0.0000 | 0.5939 | 0.0452 | 0.0324 | 96.64% | 0.0913 |
| %RSD | | 23.2370 | 26.7560 | 0.0000 | 0.0000 | 38.8780 | 21.2460 | 58.5760 | 1.23 | 28.5070 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:21:57 | 0.1179 | 0.0778 | 0.0602 | 0.0677 | 97.05% | 0.8391 |
| 2 | 15:22:37 | 0.1043 | 0.0766 | 0.0587 | 0.0714 | 96.81% | 0.1548 |
| 3 | 15:23:18 | 0.0836 | 0.0732 | 0.0694 | 0.0699 | 97.42% | -0.5330 |
| 4 | 15:23:58 | 0.0763 | 0.0702 | 0.0631 | 0.0587 | 99.32% | 1.4782 |
| 5 | 15:24:39 | 0.0713 | 0.0734 | 0.0437 | 0.0495 | 100.40% | -0.5330 |
| x | | 0.0907 | 0.0742 | 0.0590 | 0.0634 | 98.20% | 0.2812 |
| %RSD | | 21.7790 | 4.0789 | 16.0660 | 14.5750 | 1.61 | 312.3600 |

**ICSA1** 06/17/2015 15:25:40

User-Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 86.87% | 0.3435 | T 98525.0000 | T 98089.0000 | TM 101200.0000 | TM 103080.0000 | TM 102610.0000 | TM 106130.0000 | TM 104050.0000 |
| 2 | 15:27:01 | 86.84% | 0.2921 | T 97693.0000 | T 97203.0000 | TM 100640.0000 | TM 102720.0000 | TM 102120.0000 | TM 106750.0000 | TM 103630.0000 |
| 3 | 15:27:41 | 87.03% | 0.3488 | T 98458.0000 | T 97918.0000 | TM 101930.0000 | TM 104170.0000 | TM 102980.0000 | TM 107450.0000 | TM 103120.0000 |
| 4 | 15:28:21 | 86.98% | 0.3695 | T 97977.0000 | T 97412.0000 | T 99456.0000 | TM 102900.0000 | TM 102420.0000 | TM 108030.0000 | TM 103170.0000 |
| 5 | 15:29:02 | 86.93% | 0.3345 | T 94874.0000 | T 96927.0000 | TM 100970.0000 | TM 103350.0000 | TM 101820.0000 | TM 107950.0000 | TM 100570.0000 |
| x | | 86.93% | 0.3377 | T 97505.0000 | T 97510.0000 | TM 100840.0000 | TM 103250.0000 | TM 102390.0000 | TM 107260.0000 | TM 102910.0000 |
| %RSD | | 0.09 | 8.4494 | T 1.5494 | T 0.4987 | TM 0.8994 | TM 0.5517 | TM 0.4361 | TM 0.7567 | TM 1.3227 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 88.58% | 303.0000 | -2.7320 | 19.2540 | TM 102050.0000 | 8.3891 | TM 103470.0000 | TM 104480.0000 | 1.3492 |
| 2 | 15:27:01 | 89.27% | 303.9000 | -2.5924 | 19.2920 | TM 101760.0000 | 8.4188 | TM 103080.0000 | TM 104600.0000 | 1.4094 |
| 3 | 15:27:41 | 89.74% | 302.7500 | -2.7900 | 19.5810 | TM 101820.0000 | 8.5496 | TM 102950.0000 | TM 104040.0000 | 1.3772 |
| 4 | 15:28:21 | 90.73% | 301.2800 | -2.5397 | 19.5170 | TM 101590.0000 | 8.4241 | TM 102930.0000 | TM 104390.0000 | 1.3021 |
| 5 | 15:29:02 | 91.02% | 299.1200 | -2.9922 | 19.2500 | TM 101200.0000 | 8.1981 | TM 102760.0000 | TM 104280.0000 | 1.3505 |
| x | | 89.87% | 302.0100 | -2.7293 | 19.3790 | TM 101680.0000 | 8.3959 | TM 103040.0000 | TM 104360.0000 | 1.3577 |
| %RSD | | 1.13 | 0.6190 | 6.5414 | 0.8148 | TM 0.3132 | 1.5082 | TM 0.2612 | TM 0.2064 | 2.9150 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 6.6787 | 7.6243 | 8.2966 | 11.1640 | 0.2459 | 0.6996 | -0.8659 | 2.1367 | 86.42% |
| 2 | 15:27:01 | 6.7855 | 7.7930 | 8.2422 | 11.1670 | 0.3513 | 0.0337 | 0.0007 | 1.1928 | 87.41% |
| 3 | 15:27:41 | 6.5539 | 7.6470 | 8.1788 | 10.8070 | 0.3955 | 1.3559 | -0.3768 | 2.3638 | 88.42% |
| 4 | 15:28:21 | 6.7057 | 7.5912 | 8.3520 | 11.2490 | 0.3367 | 1.3535 | -0.0371 | 1.4644 | 89.17% |
| 5 | 15:29:02 | 6.8429 | 7.6346 | 8.1765 | 11.2650 | 0.3422 | 0.9182 | 0.0743 | 1.0283 | 90.09% |
| x | | 6.7133 | 7.6580 | 8.2492 | 11.1300 | 0.3343 | 0.8722 | -0.2410 | 1.6372 | 88.30% |
| %RSD | | 1.6426 | 1.0220 | 0.9213 | 1.6771 | 16.3260 | 62.8190 | 161.8500 | 35.8180 | 1.63 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 83.33% | 0.0284 | 15.1660 | 0.0398 |
| 2 | 15:27:01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 84.44% | 0.0356 | 15.5330 | 0.0442 |
| 3 | 15:27:41 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 86.01% | 0.0309 | 14.3630 | 0.0588 |
| 4 | 15:28:21 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 85.80% | 0.0358 | 13.7490 | 0.0516 |
| 5 | 15:29:02 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 86.59% | 0.0327 | 12.8810 | 0.0366 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 85.23% | 0.0327 | 14.3380 | 0.0462 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T 0.0000 | 1.55 | 9.6306 | 7.4673 | 19.5250 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 0.3822 | 1.0257 | 0.0000 | 0.0000 | 1.5470 | 1.2497 | 1.3991 | 90.99% | 0.1098 |
| 2 | 15:27:01 | -0.0790 | 1.1143 | 0.0000 | 0.0000 | 1.3483 | 1.6730 | 1.5041 | 91.47% | 0.0979 |
| 3 | 15:27:41 | 0.3578 | 0.9660 | 0.0000 | 0.0000 | 1.4047 | 1.3691 | 1.6564 | 93.17% | 0.0886 |
| 4 | 15:28:21 | 0.4501 | 1.1207 | 0.0000 | 0.0000 | 1.2702 | 1.5731 | 1.6359 | 94.35% | 0.0787 |
| 5 | 15:29:02 | 0.6574 | 1.0931 | 0.0000 | 0.0000 | 1.3416 | 1.6618 | 1.3594 | 95.84% | 0.0719 |
| x | | 0.3537 | 1.0640 | 0.0000 | 0.0000 | 1.3824 | 1.5053 | 1.5110 | 93.17% | 0.0894 |
| %RSD | | 76.0660 | 6.2478 | 0.0000 | 0.0000 | 7.5009 | 12.4760 | 8.8968 | 2.16 | 16.8800 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:26:20 | 0.1100 | 4.7330 | 4.1905 | 4.3863 | 84.41% | 1.8336 |
| 2 | 15:27:01 | 0.0962 | 4.7155 | 4.4072 | 4.4241 | 85.67% | -0.5330 |
| 3 | 15:27:41 | 0.0728 | 4.9358 | 4.1519 | 4.4310 | 85.79% | 0.2431 |
| 4 | 15:28:21 | 0.0721 | 4.8212 | 4.3549 | 4.4619 | 86.70% | 0.2349 |
| 5 | 15:29:02 | 0.0642 | 4.7534 | 4.2362 | 4.4131 | 87.13% | 0.9954 |
| x | | 0.0831 | 4.7918 | 4.2681 | 4.4233 | 85.94% | 0.5548 |
| %RSD | | 23.1800 | 1.8769 | 2.5512 | 0.6215 | 1.23 | 161.5300 |

**ICSAB1** 06/17/2015 15:30:04

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 86.88% | 19.7920 | T95143.0000 | T96724.0000 | TM100140.0000 | TM103670.0000 | TM102640.0000 | TM106230.0000 | T99262.0000 |
| 2 | 15:31:24 | 87.37% | 19.9370 | T96081.0000 | T95814.0000 | TM101300.0000 | TM103580.0000 | TM102310.0000 | TM107810.0000 | TM101040.0000 |
| 3 | 15:32:04 | 87.36% | 20.1030 | T97657.0000 | T97903.0000 | TM101400.0000 | TM105080.0000 | TM105010.0000 | TM108710.0000 | TM101610.0000 |
| 4 | 15:32:45 | 87.78% | 19.7180 | T97042.0000 | T96075.0000 | T98881.0000 | TM101490.0000 | TM100330.0000 | TM107830.0000 | TM100370.0000 |
| 5 | 15:33:25 | 87.32% | 19.5610 | T93405.0000 | T94592.0000 | T98791.0000 | TM100660.0000 | TM100170.0000 | TM105120.0000 | T97833.0000 |
| x | | 87.34% | 19.8220 | T95866.0000 | T96222.0000 | TM100100.0000 | TM102900.0000 | TM102090.0000 | TM107140.0000 | TM100020.0000 |
| %RSD | | 0.37 | 1.0458 | T1.7468 | T1.2647 | TM1.2553 | TM1.7382 | TM1.9398 | TM1.3469 | TM1.5051 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 91.28% | 293.1200 | 17.3370 | 38.6840 | T99824.0000 | 27.6320 | TM101780.0000 | TM103020.0000 | 20.0870 |
| 2 | 15:31:24 | 91.45% | 298.2800 | 16.8570 | 38.5300 | TM100220.0000 | 28.0140 | TM101660.0000 | TM103610.0000 | 20.1960 |
| 3 | 15:32:04 | 91.76% | 299.6000 | 17.4180 | 39.4660 | TM101460.0000 | 28.3800 | TM102850.0000 | TM105210.0000 | 20.6960 |
| 4 | 15:32:45 | 92.94% | 292.5800 | 17.1280 | 38.3340 | T98920.0000 | 27.2200 | T99461.0000 | TM101330.0000 | 20.0940 |
| 5 | 15:33:25 | 92.70% | 289.7800 | 16.5490 | 37.8490 | T98629.0000 | 27.5980 | T99846.0000 | TM101570.0000 | 19.6620 |
| x | | 92.03% | 294.6700 | 17.0580 | 38.5730 | TM99811.0000 | 27.7690 | TM101120.0000 | TM102950.0000 | 20.1470 |
| %RSD | | 0.82 | 1.3998 | 2.0968 | 1.5298 | TM1.1289 | 1.5925 | TM1.4058 | TM1.5403 | 1.8336 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 25.2310 | 25.6030 | 25.8960 | 27.0810 | 18.6130 | 18.2790 | 17.7890 | 1.2279 | 91.41% |
| 2 | 15:31:24 | 25.2180 | 25.6420 | 26.5220 | 27.4790 | 18.7490 | 19.3990 | 17.4120 | 0.9225 | 92.59% |
| 3 | 15:32:04 | 25.7120 | 26.1060 | 27.6720 | 28.0840 | 19.3220 | 20.1850 | 18.4400 | 1.9595 | 90.93% |
| 4 | 15:32:45 | 25.1780 | 25.6080 | 25.5960 | 27.1850 | 18.4570 | 19.7610 | 17.3410 | 0.4876 | 92.87% |
| 5 | 15:33:25 | 24.8550 | 24.4760 | 25.6270 | 27.1930 | 18.2770 | 19.0270 | 17.1490 | 1.0974 | 92.19% |
| x | | 25.2390 | 25.4870 | 26.2630 | 27.4040 | 18.6840 | 19.3300 | 17.6260 | 1.1389 | 92.00% |
| %RSD | | 1.2147 | 2.3684 | 3.3169 | 1.4879 | 2.1303 | 3.7646 | 2.8990 | 47.1600 | 0.88 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 88.17% | 18.7220 | 13.5950 | 18.8020 |
| 2 | 15:31:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 88.38% | 18.7450 | 14.7060 | 19.0530 |
| 3 | 15:32:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 88.25% | 19.3050 | 14.8800 | 19.3530 |
| 4 | 15:32:45 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 88.86% | 19.1530 | 14.0800 | 19.0810 |
| 5 | 15:33:25 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 89.28% | 18.1980 | 13.9480 | 18.4970 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 88.59% | 18.8240 | 14.2420 | 18.9570 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | T0.0000 | 0.53 | 2.2965 | 3.7704 | 1.7030 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 19.3670 | 19.7490 | 0.0000 | 0.0000 | 20.9980 | 22.0830 | 22.9540 | 97.54% | 21.0670 |
| 2 | 15:31:24 | 20.0430 | 20.0030 | 0.0000 | 0.0000 | 21.3390 | 21.2000 | 22.4830 | 97.57% | 20.7990 |
| 3 | 15:32:04 | 19.3720 | 20.1790 | 0.0000 | 0.0000 | 21.2440 | 22.8020 | 22.6300 | 97.19% | 21.1780 |
| 4 | 15:32:45 | 19.4180 | 20.3000 | 0.0000 | 0.0000 | 20.2960 | 21.6520 | 22.8510 | 97.15% | 21.0110 |
| 5 | 15:33:25 | 18.8270 | 19.5160 | 0.0000 | 0.0000 | 20.1900 | 21.1020 | 21.7550 | 98.83% | 20.2280 |
| x | | 19.4050 | 19.9490 | 0.0000 | 0.0000 | 20.8140 | 21.7680 | 22.5350 | 97.66% | 20.8570 |
| %RSD | | 2.2227 | 1.5972 | 0.0000 | 0.0000 | 2.5789 | 3.2059 | 2.1005 | 0.70 | 1.8097 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:30:44 | 20.5680 | 25.6140 | 24.6500 | 24.7940 | 88.00% | -0.5330 |
| 2 | 15:31:24 | 20.8120 | 25.8100 | 24.3990 | 24.7420 | 88.78% | -0.5330 |
| 3 | 15:32:04 | 21.1770 | 26.5560 | 24.8850 | 25.2290 | 88.13% | -0.5330 |
| 4 | 15:32:45 | 20.8910 | 26.3680 | 24.7080 | 24.9670 | 87.93% | 0.9814 |
| 5 | 15:33:25 | 20.1270 | 25.2130 | 23.3180 | 23.7740 | 89.80% | 1.6913 |
| x | | 20.7150 | 25.9120 | 24.3920 | 24.7010 | 88.53% | 0.2147 |
| %RSD | | 1.9026 | 2.1226 | 2.5633 | 2.2347 | 0.89 | 490.9500 |

**CCV1** 06/17/2015 15:34:27

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | 92.12% | ↑2577.6000 | ↑48918.0000 | ↑49381.0000 | ↑49852.0000 | ↑50659.0000 | ↑50399.0000 | ↑51554.0000 | 49737.0000 |
| 2 | 15:35:47 | 93.11% | ↑2583.2000 | ↑49132.0000 | ↑49318.0000 | ↑49775.0000 | ↑50534.0000 | ↑50044.0000 | ↑51411.0000 | 49936.0000 |
| 3 | 15:36:28 | 93.01% | ↑2586.0000 | ↑49268.0000 | ↑49615.0000 | ↑50209.0000 | ↑50576.0000 | ↑50110.0000 | ↑51595.0000 | 49935.0000 |
| 4 | 15:37:08 | 93.36% | ↑2535.7000 | ↑49253.0000 | ↑49037.0000 | ↑49021.0000 | ↑49963.0000 | ↑48896.0000 | ↑51103.0000 | 49221.0000 |
| 5 | 15:37:48 | 93.76% | ↑2469.7000 | ↑47526.0000 | ↑48034.0000 | ↑47882.0000 | ↑48644.0000 | ↑48090.0000 | ↑49056.0000 | 48458.0000 |
| x | | 93.08% | ↑2550.4000 | ↑48819.0000 | ↑49077.0000 | ↑49348.0000 | ↑50075.0000 | ↑49508.0000 | ↑50944.0000 | 49458.0000 |
| %RSD | | 0.65 | ↑1.9425 | ↑1.5082 | ↑1.2600 | ↑1.8773 | ↑1.6893 | ↑1.9767 | ↑2.1058 | 1.2745 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | 94.55% | 0.1527 | ↑2583.2000 | ↑2504.8000 | ↑49758.0000 | ↑2504.8000 | ↑49139.0000 | 49550.0000 | ↑2495.4000 |
| 2 | 15:35:47 | 95.59% | 0.1222 | ↑2582.5000 | ↑2526.5000 | ↑49515.0000 | ↑2496.4000 | ↑49032.0000 | 49259.0000 | ↑2497.2000 |
| 3 | 15:36:28 | 96.26% | 0.0827 | ↑2584.1000 | ↑2507.1000 | ↑49632.0000 | ↑2474.4000 | ↑49014.0000 | 49035.0000 | ↑2495.9000 |
| 4 | 15:37:08 | 96.55% | 0.0540 | ↑2543.4000 | ↑2468.4000 | ↑48965.0000 | ↑2441.0000 | ↑48212.0000 | 48346.0000 | ↑2458.9000 |
| 5 | 15:37:48 | 98.19% | 0.0726 | ↑2446.7000 | ↑2399.8000 | ↑48133.0000 | ↑2382.8000 | ↑47182.0000 | 47104.0000 | ↑2372.1000 |
| x | | 96.23% | 0.0969 | ↑2548.0000 | ↑2481.3000 | ↑49201.0000 | ↑2459.9000 | ↑48516.0000 | 48659.0000 | ↑2463.9000 |
| %RSD | | 1.39 | 41.2460 | ↑2.3233 | ↑2.0229 | ↑1.3596 | ↑2.0178 | ↑1.7164 | 2.0065 | ↑2.1835 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | ↑2453.6000 | ↑2406.2000 | ↑2427.2000 | 2404.6000 | 2495.8000 | 263.2100 | 262.1900 | 1.2052 | 92.22% |
| 2 | 15:35:47 | 2519.2000 | ↑2391.0000 | ↑2386.2000 | 2389.4000 | 2499.7000 | 265.2200 | 260.8100 | 2.1973 | 92.93% |
| 3 | 15:36:28 | 2539.2000 | ↑2399.0000 | ↑2403.1000 | 2391.2000 | 2495.8000 | 266.4600 | 256.7600 | 1.2075 | 93.08% |
| 4 | 15:37:08 | 2491.4000 | ↑2389.8000 | ↑2386.8000 | 2350.1000 | 2458.9000 | 266.5600 | 255.7500 | 1.5262 | 93.41% |
| 5 | 15:37:48 | 2413.3000 | ↑2295.3000 | ↑2300.1000 | 2313.5000 | 2393.9000 | 254.9200 | 250.9900 | 2.3646 | 94.50% |
| x | | ↑2483.4000 | ↑2376.3000 | ↑2380.7000 | 2369.8000 | 2468.8000 | 263.2700 | 257.3000 | 1.7002 | 93.23% |
| %RSD | | ↑2.0387 | ↑1.9246 | ↑2.0165 | 1.5808 | 1.8261 | 1.8465 | 1.7237 | 32.3040 | 0.89 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 90.95% | 265.6000 | -31.4980 | 264.3600 |
| 2 | 15:35:47 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 90.21% | 270.4300 | -29.0620 | 267.8400 |
| 3 | 15:36:28 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 90.88% | 270.6900 | -24.0450 | 270.5400 |
| 4 | 15:37:08 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 90.80% | 271.0300 | -28.9370 | 270.5100 |
| 5 | 15:37:48 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 91.89% | 254.9300 | -19.8390 | 256.1500 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 90.94% | 266.5400 | -26.6760 | 265.8800 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.67 | 2.5732 | 17.5550 | 2.2565 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | 2478.0000 | ↑2482.7000 | 0.0000 | 0.0000 | ↑2566.5000 | 2483.4000 | 2596.6000 | 95.16% | ↑2558.3000 |
| 2 | 15:35:47 | 2501.8000 | ↑2518.5000 | 0.0000 | 0.0000 | ↑2581.4000 | 2517.0000 | 2616.8000 | 95.75% | ↑2564.0000 |
| 3 | 15:36:28 | 2488.3000 | ↑2482.7000 | 0.0000 | 0.0000 | ↑2562.6000 | 2489.4000 | 2598.6000 | 95.34% | ↑2555.0000 |
| 4 | 15:37:08 | 2465.2000 | ↑2460.9000 | 0.0000 | 0.0000 | ↑2515.7000 | 2468.2000 | 2584.1000 | 95.60% | ↑2573.8000 |
| 5 | 15:37:48 | 2388.0000 | ↑2382.2000 | 0.0000 | 0.0000 | ↑2459.1000 | 2398.1000 | 2510.6000 | 95.96% | ↑2464.2000 |
| x | | 2464.3000 | ↑2465.4000 | 0.0000 | 0.0000 | ↑2537.1000 | 2471.2000 | 2581.3000 | 95.56% | ↑2543.1000 |
| %RSD | | 1.8149 | ↑2.0637 | 0.0000 | 0.0000 | ↑1.9733 | 1.8021 | 1.5983 | 0.33 | ↑1.7562 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:35:07 | ↑2552.2000 | ↑2552.8000 | ↑2568.0000 | ↑2559.2000 | 89.75% | 0.2088 |
| 2 | 15:35:47 | ↑2560.4000 | ↑2539.4000 | ↑2553.5000 | ↑2560.3000 | 90.07% | 0.2062 |
| 3 | 15:36:28 | ↑2558.6000 | ↑2547.1000 | ↑2550.8000 | ↑2565.6000 | 89.60% | 0.2101 |
| 4 | 15:37:08 | ↑2585.8000 | ↑2545.5000 | ↑2553.6000 | ↑2554.0000 | 89.13% | 0.9611 |
| 5 | 15:37:48 | ↑2468.1000 | ↑2463.9000 | ↑2456.3000 | ↑2463.9000 | 90.44% | 2.4121 |
| x | | ↑2545.0000 | ↑2529.7000 | ↑2536.4000 | ↑2540.6000 | 89.80% | 0.7997 |
| %RSD | | ↑1.7635 | ↑1.4674 | ↑1.7854 | ↑1.6956 | 0.55 | 119.8600 |

**CCB1** 06/17/2015 15:38:50

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 103.22% | 0.5359 | 24.0720 | 12.2960 | 12.8020 | 12.7520 | 13.0440 | 40.6500 | 10.2020 |
| 2 | 15:40:10 | 105.68% | 0.3666 | 19.1030 | 10.9340 | 12.1480 | 11.1330 | 12.1600 | 33.2540 | 8.5672 |
| 3 | 15:40:51 | 106.81% | 0.3691 | 15.9370 | 8.9707 | 8.6721 | 8.7037 | 8.9670 | 26.9320 | 4.3151 |
| 4 | 15:41:31 | 108.28% | 0.2872 | 12.3950 | 6.8304 | 7.4899 | 7.5231 | 7.3448 | 20.7790 | 3.1508 |
| 5 | 15:42:11 | 108.26% | 0.1826 | 10.0700 | 5.3110 | 6.0397 | 5.3931 | 5.7965 | 16.5870 | 0.8376 |
| x | | 106.45% | 0.3483 | 16.3150 | 8.8684 | 9.4305 | 9.1011 | 9.4627 | 27.6400 | 5.4145 |
| %RSD | | 1.98 | 37.2030 | 33.9140 | 32.3050 | 31.1850 | 31.9670 | 32.6920 | 34.8200 | 71.6120 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 101.47% | 0.0236 | 0.4377 | 0.3443 | 11.3450 | 0.3943 | 5.3163 | 16.4030 | 0.3617 |
| 2 | 15:40:10 | 103.47% | 0.0401 | 0.3574 | 0.2556 | 9.3311 | 0.3277 | 3.9721 | 15.6540 | 0.3362 |
| 3 | 15:40:51 | 103.79% | 0.0212 | 0.3245 | 0.2618 | 8.5455 | 0.2837 | 2.0842 | 12.1200 | 0.2788 |
| 4 | 15:41:31 | 105.39% | 0.0207 | 0.2492 | 0.1594 | 5.2110 | 0.2563 | -0.5960 | 6.1044 | 0.2167 |
| 5 | 15:42:11 | 106.46% | 0.0188 | 0.2807 | 0.1576 | 4.5355 | 0.1889 | -2.5454 | 8.5783 | 0.1776 |
| x | | 104.12% | 0.0249 | 0.3299 | 0.2357 | 7.7936 | 0.2902 | 1.6462 | 11.7720 | 0.2742 |
| %RSD | | 1.84 | 34.7880 | 22.1350 | 33.3820 | 36.7570 | 26.5240 | 196.0500 | 37.7420 | 28.3430 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 0.4008 | 0.8319 | 0.6905 | 0.5684 | 0.5587 | 3.6557 | -0.0347 | -0.4537 | 99.17% |
| 2 | 15:40:10 | 0.3229 | 0.7549 | 0.5674 | 0.3972 | 0.4836 | 2.5180 | -0.0015 | 0.3902 | 99.94% |
| 3 | 15:40:51 | 0.2492 | 0.5721 | 0.4569 | 0.4138 | 0.3174 | 2.9080 | -0.1976 | -1.1749 | 101.88% |
| 4 | 15:41:31 | 0.2093 | 0.5506 | 0.2461 | 0.4288 | 0.2761 | 3.2661 | -0.1964 | 0.3860 | 102.71% |
| 5 | 15:42:11 | 0.1565 | 0.4296 | 0.3089 | 0.3314 | 0.2878 | 2.9114 | 0.0470 | -0.8770 | 102.53% |
| x | | 0.2677 | 0.6278 | 0.4540 | 0.4279 | 0.3847 | 3.0518 | -0.0766 | -0.3459 | 101.25% |
| %RSD | | 35.8650 | 25.9470 | 40.1790 | 20.3050 | 33.3330 | 14.0550 | 148.2500 | 207.4000 | 1.58 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.15% | 0.1622 | -0.6156 | 0.1624 |
| 2 | 15:40:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.37% | 0.1310 | 0.1742 | 0.1138 |
| 3 | 15:40:51 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.71% | 0.1321 | -0.4331 | 0.1147 |
| 4 | 15:41:31 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.78% | 0.1134 | -0.2962 | 0.1115 |
| 5 | 15:42:11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.40% | 0.0662 | -0.6593 | 0.0542 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.08% | 0.1210 | -0.3660 | 0.1113 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.30 | 29.1530 | 91.5910 | 34.4830 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 0.4168 | 0.3787 | 0.0000 | 0.0000 | 1.9413 | 0.4041 | 0.3768 | 99.22% | 0.7280 |
| 2 | 15:40:10 | 0.3077 | 0.3444 | 0.0000 | 0.0000 | 1.4546 | 0.3425 | 0.3197 | 101.83% | 0.5132 |
| 3 | 15:40:51 | 0.2545 | 0.3019 | 0.0000 | 0.0000 | 1.0631 | 0.2281 | 0.2701 | 101.31% | 0.3757 |
| 4 | 15:41:31 | 0.2113 | 0.2468 | 0.0000 | 0.0000 | 0.8955 | 0.2178 | 0.2622 | 103.31% | 0.2964 |
| 5 | 15:42:11 | 0.1898 | 0.1698 | 0.0000 | 0.0000 | 0.7496 | 0.1875 | 0.1434 | 103.16% | 0.2476 |
| x | | 0.2760 | 0.2883 | 0.0000 | 0.0000 | 1.2208 | 0.2760 | 0.2744 | 101.77% | 0.4322 |
| %RSD | | 32.8570 | 28.6320 | 0.0000 | 0.0000 | 39.4240 | 33.5730 | 31.4910 | 1.63 | 44.7800 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:39:30 | 0.7514 | 0.5020 | 0.4445 | 0.4666 | 101.38% | -0.5330 |
| 2 | 15:40:10 | 0.4730 | 0.3739 | 0.3587 | 0.3531 | 102.23% | 0.1183 |
| 3 | 15:40:51 | 0.3821 | 0.3428 | 0.3230 | 0.3282 | 103.47% | 0.1105 |
| 4 | 15:41:31 | 0.2927 | 0.2564 | 0.2611 | 0.2552 | 103.61% | 0.7523 |
| 5 | 15:42:11 | 0.2521 | 0.2117 | 0.2351 | 0.2270 | 103.27% | -0.5330 |
| x | | 0.4303 | 0.3374 | 0.3245 | 0.3260 | 102.79% | -0.0170 |
| %RSD | | 46.1860 | 33.4110 | 25.5960 | 28.8150 | 0.93 | 3166.6000 |

**PBS1-5x** 06/17/2015 15:43:13

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 107.44% | 0.0674 | 1.1448 | 1.9887 | 2.0540 | 2.1527 | 1.9965 | 7.8564 | -0.3295 |
| 2 | 15:44:34 | 110.14% | 0.0901 | 0.5148 | 2.0287 | 1.9128 | 1.9272 | 1.5700 | 5.1682 | -2.9016 |
| 3 | 15:45:14 | 109.89% | 0.0764 | 0.0548 | 1.7055 | 1.7322 | 1.8834 | 1.2747 | 4.1470 | 0.0096 |
| 4 | 15:45:54 | 111.50% | 0.0835 | -0.7097 | 1.6848 | 1.4003 | 1.4362 | 1.6807 | 4.9219 | -2.7644 |
| 5 | 15:46:35 | 111.98% | 0.0655 | -0.8655 | 1.5983 | 1.5264 | 1.8956 | 2.0757 | 3.9896 | -0.4106 |
| x | | 110.19% | 0.0766 | 0.0278 | 1.8012 | 1.7251 | 1.8590 | 1.7195 | 5.2166 | -1.2793 |
| %RSD | | 1.61 | 13.6690 | 3019.9000 | 10.7780 | 15.5660 | 14.0170 | 18.9630 | 29.8620 | 111.6200 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 105.14% | 0.0101 | 0.1513 | 0.0644 | 3.9676 | 0.0735 | -4.0644 | 6.1264 | 0.0517 |
| 2 | 15:44:34 | 107.19% | 0.0141 | 0.1060 | 0.0188 | 6.5318 | 0.0702 | -5.2898 | 3.0494 | 0.0449 |
| 3 | 15:45:14 | 107.48% | 0.0125 | 0.0881 | 0.0168 | 3.8229 | 0.0604 | -4.3074 | 4.5345 | 0.0516 |
| 4 | 15:45:54 | 108.06% | 0.0378 | 0.0707 | -0.0159 | 5.0974 | 0.0636 | -4.4827 | 5.4030 | 0.0471 |
| 5 | 15:46:35 | 108.49% | 0.0197 | 0.0799 | 0.0396 | 4.8638 | 0.0528 | -5.1534 | 4.8056 | 0.0343 |
| x | | 107.27% | 0.0188 | 0.0992 | 0.0247 | 4.8567 | 0.0641 | -4.6595 | 4.7838 | 0.0459 |
| %RSD | | 1.21 | 59.2690 | 32.1500 | 120.1900 | 22.3740 | 12.7540 | 11.5100 | 23.9640 | 15.4720 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 0.0400 | 0.2228 | 0.1164 | 0.7835 | 0.1910 | 1.9656 | -0.0178 | -1.0545 | 100.47% |
| 2 | 15:44:34 | 0.0229 | 0.2214 | 0.0220 | 0.8694 | 0.1029 | 2.4410 | -0.0662 | -1.0525 | 102.86% |
| 3 | 15:45:14 | 0.0331 | 0.1824 | 0.1018 | 0.8320 | 0.1795 | 2.0430 | 0.1765 | -0.8117 | 102.40% |
| 4 | 15:45:54 | 0.0373 | 0.1656 | 0.0815 | 0.8042 | 0.0329 | 2.1264 | -0.2252 | -0.3460 | 104.23% |
| 5 | 15:46:35 | -0.0031 | 0.1886 | 0.1310 | 0.7896 | 0.0449 | 1.8185 | -0.2582 | 0.8861 | 103.70% |
| x | | 0.0261 | 0.1961 | 0.0905 | 0.8157 | 0.1102 | 2.0789 | -0.0782 | -0.4757 | 102.73% |
| %RSD | | 67.2590 | 12.8190 | 46.8950 | 4.3363 | 66.6720 | 11.1590 | 223.9900 | 171.1500 | 1.41 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.56% | 0.0385 | -0.2845 | 0.0213 |
| 2 | 15:44:34 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.54% | 0.0279 | -0.4112 | 0.0292 |
| 3 | 15:45:14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.61% | 0.0343 | -0.5439 | 0.0423 |
| 4 | 15:45:54 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 103.82% | 0.0499 | -0.3096 | 0.0459 |
| 5 | 15:46:35 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 104.06% | 0.0138 | 0.6373 | 0.0113 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.72% | 0.0329 | -0.1824 | 0.0300 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.35 | 40.5700 | 257.3900 | 48.1190 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 0.0500 | 0.0264 | 0.0000 | 0.0000 | 0.4636 | 0.0774 | 0.0794 | 101.21% | 0.1076 |
| 2 | 15:44:34 | 0.0488 | 0.0634 | 0.0000 | 0.0000 | 0.3573 | 0.0689 | 0.0607 | 101.53% | 0.1197 |
| 3 | 15:45:14 | 0.0790 | 0.0322 | 0.0000 | 0.0000 | 0.3332 | 0.0236 | 0.0340 | 102.02% | 0.0875 |
| 4 | 15:45:54 | 0.0373 | 0.0428 | 0.0000 | 0.0000 | 0.2713 | 0.0455 | 0.0467 | 102.74% | 0.0868 |
| 5 | 15:46:35 | 0.0292 | 0.0366 | 0.0000 | 0.0000 | 0.3141 | 0.0966 | 0.0331 | 103.97% | 0.0839 |
| x | | 0.0489 | 0.0403 | 0.0000 | 0.0000 | 0.3479 | 0.0624 | 0.0508 | 102.29% | 0.0971 |
| %RSD | | 38.6800 | 35.3230 | 0.0000 | 0.0000 | 20.6810 | 45.5660 | 38.4850 | 1.08 | 16.2400 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:43:54 | 0.1192 | 0.0867 | 0.0880 | 0.0958 | 102.23% | 0.1183 |
| 2 | 15:44:34 | 0.1146 | 0.0928 | 0.0797 | 0.0891 | 102.94% | 0.1138 |
| 3 | 15:45:14 | 0.0961 | 0.0827 | 0.0789 | 0.0665 | 102.16% | -0.5330 |
| 4 | 15:45:54 | 0.0797 | 0.0760 | 0.0821 | 0.0787 | 103.59% | -0.5330 |
| 5 | 15:46:35 | 0.0874 | 0.0840 | 0.0704 | 0.0668 | 105.03% | -0.5330 |
| x | | 0.0994 | 0.0844 | 0.0798 | 0.0794 | 103.19% | -0.2734 |
| %RSD | | 17.1720 | 7.2209 | 7.9384 | 16.5710 | 1.15 | 130.0400 |

**LCS1-5x** 06/17/2015 15:47:37

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 110.24% | 2.1272 | ┬939.3500 | 927.5600 | 908.4400 | 938.3600 | 39.4000 | 999.3900 | 931.4100 |
| 2 | 15:48:58 | 111.52% | 2.1263 | ┬946.4600 | 921.6700 | 924.2100 | 937.5200 | 38.8750 | 1004.3000 | 943.2100 |
| 3 | 15:49:38 | 110.34% | 2.0978 | ┬960.8700 | 947.4600 | 942.7600 | 943.5000 | 39.1420 | 1009.2000 | 933.0800 |
| 4 | 15:50:18 | 111.15% | 1.9848 | ┬961.2100 | 934.1600 | 937.0200 | 940.1400 | 38.8570 | 1014.9000 | 958.5800 |
| 5 | 15:50:59 | 112.10% | 2.0134 | ┬926.7700 | 909.2900 | 902.6800 | 930.6500 | 38.0790 | 982.1700 | 915.1100 |
| X | | 111.07% | 2.0699 | ┬946.9300 | 928.0300 | 923.0200 | 938.0300 | 38.8710 | 1002.0000 | 936.2800 |
| %RSD | | 0.71 | 3.2114 | ┬1.5504 | 1.5306 | 1.8868 | 0.5032 | 1.2740 | 1.2461 | 1.7119 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 104.76% | 0.0302 | 10.2850 | 3.8122 | 373.0900 | 1.9549 | 386.1400 | 382.0100 | 1.8827 |
| 2 | 15:48:58 | 106.66% | 0.0112 | 10.4610 | 3.8389 | 383.7300 | 1.9410 | 385.2300 | 395.1200 | 1.9530 |
| 3 | 15:49:38 | 107.72% | 0.0125 | 10.4780 | 3.7163 | 388.6000 | 1.9792 | 392.5000 | 379.9000 | 1.8816 |
| 4 | 15:50:18 | 108.06% | 0.0079 | 10.4260 | 3.7005 | 383.4700 | 1.9544 | 384.9000 | 387.6000 | 1.9223 |
| 5 | 15:50:59 | 108.42% | 0.0257 | 9.8830 | 3.6348 | 379.4300 | 1.8582 | 378.3700 | 387.9000 | 1.8805 |
| X | | 107.12% | 0.0175 | 10.3070 | 3.7405 | 381.6600 | 1.9375 | 385.4300 | 386.5100 | 1.9040 |
| %RSD | | 1.38 | 56.0370 | 2.4145 | 2.2433 | 1.5175 | 2.3963 | 1.3010 | 1.5369 | 1.7106 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 1.9273 | 4.0030 | 3.9263 | 4.8406 | 1.9500 | 10.5720 | 9.1661 | 0.0091 | 101.35% |
| 2 | 15:48:58 | 2.0472 | 4.2704 | 4.1998 | 4.8943 | 1.6591 | 11.0710 | 8.8106 | 0.1279 | 101.83% |
| 3 | 15:49:38 | 2.1320 | 4.0804 | 4.2661 | 4.5945 | 2.0190 | 11.6970 | 9.7535 | -1.6410 | 102.68% |
| 4 | 15:50:18 | 1.9252 | 4.2998 | 4.2524 | 4.5745 | 2.0780 | 11.5000 | 9.4933 | 0.6631 | 102.23% |
| 5 | 15:50:59 | 1.9772 | 4.1505 | 4.1001 | 4.3226 | 1.5677 | 10.7820 | 8.1558 | 1.2690 | 103.25% |
| X | | 2.0018 | 4.1608 | 4.1489 | 4.6453 | 1.8548 | 11.1240 | 9.0759 | 0.0856 | 102.27% |
| %RSD | | 4.4002 | 3.0119 | 3.3873 | 4.9546 | 12.2520 | 4.2497 | 6.8776 | 1269.2000 | 0.72 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 100.86% | 2.0147 | -0.3797 | 1.9859 |
| 2 | 15:48:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.39% | 2.0467 | -0.4920 | 2.0624 |
| 3 | 15:49:38 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 101.98% | 2.0423 | 0.1596 | 2.0807 |
| 4 | 15:50:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.55% | 2.1576 | -0.6613 | 2.0554 |
| 5 | 15:50:59 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 103.70% | 1.9981 | -0.0331 | 1.9601 |
| X | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 102.30% | 2.0519 | -0.2813 | 2.0289 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.00 | 3.0398 | 119.8300 | 2.5961 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 1.7843 | 1.9459 | 0.0000 | 0.0000 | 3.7786 | 18.4770 | 19.6530 | 101.05% | 1.9272 |
| 2 | 15:48:58 | 1.9070 | 1.9511 | 0.0000 | 0.0000 | 3.8153 | 19.2540 | 19.3470 | 102.20% | 1.9428 |
| 3 | 15:49:38 | 1.9116 | 2.0483 | 0.0000 | 0.0000 | 3.9296 | 19.6400 | 19.7050 | 102.00% | 1.9338 |
| 4 | 15:50:18 | 1.9514 | 1.8824 | 0.0000 | 0.0000 | 3.7003 | 19.9390 | 19.7290 | 101.06% | 2.0186 |
| 5 | 15:50:59 | 1.9837 | 1.8865 | 0.0000 | 0.0000 | 3.6725 | 18.4490 | 18.9360 | 102.76% | 1.8600 |
| X | | 1.9076 | 1.9429 | 0.0000 | 0.0000 | 3.7793 | 19.1520 | 19.4740 | 101.81% | 1.9365 |
| %RSD | | 3.9686 | 3.4561 | 0.0000 | 0.0000 | 2.6961 | 3.5199 | 1.7347 | 0.73 | 2.9121 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:48:18 | 1.9123 | 1.8976 | 2.0179 | 1.9238 | 101.63% | -0.5330 |
| 2 | 15:48:58 | 1.9867 | 1.8763 | 2.1055 | 1.9658 | 102.22% | 0.1183 |
| 3 | 15:49:38 | 1.9509 | 1.9595 | 2.0019 | 1.9049 | 102.43% | 0.1170 |
| 4 | 15:50:18 | 1.9580 | 1.9122 | 1.9538 | 1.9127 | 103.03% | 0.1133 |
| 5 | 15:50:59 | 1.8886 | 1.8963 | 1.9260 | 1.8594 | 103.83% | 0.1083 |
| X | | 1.9393 | 1.9084 | 2.0010 | 1.9133 | 102.63% | -0.0152 |
| %RSD | | 2.0020 | 1.6406 | 3.4488 | 1.9971 | 0.82 | 1901.1000 |

**MF9M21-5x** 06/17/2015 15:52:01

User-Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 100.89% | 1.2409 | 34.9750 | 1421.1000 | 1407.7000 | 1450.6000 | τ13295.0000 | τ1990.9000 | 2984.3000 |
| 2 | 15:53:22 | 102.41% | 1.2237 | 34.9400 | τ1465.5000 | 1423.7000 | 1439.8000 | τ13406.0000 | τ2011.1000 | 3056.5000 |
| 3 | 15:54:02 | 101.11% | 1.1259 | 35.4920 | τ1485.4000 | 1455.1000 | 1480.1000 | τ13561.0000 | τ2010.0000 | 3074.9000 |
| 4 | 15:54:42 | 101.55% | 1.1879 | 34.4940 | 1448.3000 | 1423.2000 | 1427.7000 | τ13275.0000 | τ1995.1000 | 3010.1000 |
| 5 | 15:55:23 | 102.10% | 1.1427 | 33.6400 | τ1426.7000 | 1408.1000 | 1417.6000 | τ13129.0000 | τ1948.0000 | 2965.9000 |
| x | | 101.61% | 1.1842 | 34.7080 | τ1449.4000 | 1423.6000 | 1443.2000 | τ13333.0000 | τ1991.0000 | 3018.4000 |
| %RSD | | 0.63 | 4.2031 | 1.9996 | τ1.8506 | 1.3544 | 1.6705 | τ1.2053 | τ1.2875 | 1.5390 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 105.28% | 13.2280 | 41.1460 | 53.3950 | τ31908.0000 | τ451.6800 | τ32489.0000 | 31489.0000 | 9.3245 |
| 2 | 15:53:22 | 106.29% | 13.5150 | 41.5830 | 53.7670 | τ32448.0000 | 455.6800 | τ32703.0000 | 31649.0000 | 9.4203 |
| 3 | 15:54:02 | 106.58% | 13.5050 | 42.3820 | 53.9090 | τ32302.0000 | τ454.1200 | τ32802.0000 | 31647.0000 | 9.4049 |
| 4 | 15:54:42 | 106.96% | 12.9650 | 41.5620 | 53.0790 | τ31837.0000 | τ449.5200 | τ32203.0000 | 31403.0000 | 9.4134 |
| 5 | 15:55:23 | 106.49% | 12.8190 | 40.6910 | 52.9130 | τ31848.0000 | τ446.5500 | τ32228.0000 | 31154.0000 | 9.2033 |
| x | | 106.32% | 13.2070 | 41.4730 | 53.4130 | τ32068.0000 | τ451.5100 | τ32485.0000 | 31468.0000 | 9.3533 |
| %RSD | | 0.59 | 2.3741 | 1.5087 | 0.8016 | τ0.8912 | τ0.8045 | τ0.8338 | 0.6518 | 0.9871 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 15.7520 | 17.1560 | 17.4990 | 42.3320 | 13.4790 | 2.2381 | 0.2382 | 1.4375 | 103.97% |
| 2 | 15:53:22 | 16.2050 | 17.2970 | 17.4330 | 42.1680 | 13.8460 | 1.7644 | 1.3375 | -1.3308 | 104.51% |
| 3 | 15:54:02 | 16.1370 | 17.0600 | 17.1550 | 42.2180 | 13.4410 | 1.7126 | 0.0928 | 0.8316 | 105.06% |
| 4 | 15:54:42 | 15.8360 | 17.1610 | 17.6820 | 42.8780 | 13.5520 | 1.7883 | 0.7665 | -0.2931 | 103.88% |
| 5 | 15:55:23 | 15.7230 | 16.8390 | 17.0340 | 41.6320 | 12.9550 | 1.3404 | -0.2574 | 1.7374 | 104.58% |
| x | | 15.9310 | 17.1030 | 17.3610 | 42.2460 | 13.4550 | 1.7688 | 0.4355 | 0.4765 | 104.40% |
| %RSD | | 1.4096 | 0.9928 | 1.5156 | 1.0521 | 2.3882 | 18.0420 | 143.3700 | 267.4800 | 0.46 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.39% | 0.0691 | -1.3545 | 0.0452 |
| 2 | 15:53:22 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.02% | 0.0629 | -1.6749 | 0.0507 |
| 3 | 15:54:02 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.46% | 0.0781 | -1.6751 | 0.0627 |
| 4 | 15:54:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.20% | 0.0815 | -1.5558 | 0.0588 |
| 5 | 15:55:23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.66% | 0.0656 | -1.5912 | 0.0449 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.15% | 0.0715 | -1.5703 | 0.0525 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.49 | 11.2530 | 8.3719 | 15.3040 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 0.0843 | 0.2183 | 0.0000 | 0.0000 | 0.2080 | 89.2840 | 92.9250 | 98.58% | 0.1509 |
| 2 | 15:53:22 | 0.1258 | 0.1819 | 0.0000 | 0.0000 | 0.2265 | 91.4070 | 95.3930 | 98.50% | 0.1577 |
| 3 | 15:54:02 | 0.1344 | 0.1491 | 0.0000 | 0.0000 | 0.1857 | 92.5120 | 95.3590 | 98.36% | 0.1513 |
| 4 | 15:54:42 | 0.1257 | 0.1680 | 0.0000 | 0.0000 | 0.1692 | 89.7080 | 93.9590 | 99.78% | 0.1381 |
| 5 | 15:55:23 | 0.0423 | 0.1332 | 0.0000 | 0.0000 | 0.1938 | 87.8770 | 92.3760 | 100.31% | 0.1654 |
| x | | 0.1025 | 0.1701 | 0.0000 | 0.0000 | 0.1966 | 90.1580 | 94.0020 | 99.11% | 0.1527 |
| %RSD | | 37.9730 | 19.2210 | 0.0000 | 0.0000 | 11.0900 | 2.0200 | 1.4648 | 0.89 | 6.5973 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:52:42 | 0.1645 | 37.5500 | 34.3430 | 35.4590 | 97.53% | 0.1497 |
| 2 | 15:53:22 | 0.1522 | 37.9080 | 35.2760 | 36.0160 | 97.53% | 0.1497 |
| 3 | 15:54:02 | 0.1660 | 37.9270 | 34.7320 | 35.9620 | 97.67% | 0.1487 |
| 4 | 15:54:42 | 0.1436 | 37.3870 | 34.6060 | 35.5070 | 97.25% | 0.1516 |
| 5 | 15:55:23 | 0.1576 | 36.4790 | 33.8880 | 34.8420 | 98.51% | 1.4947 |
| x | | 0.1568 | 37.4500 | 34.5690 | 35.5570 | 97.70% | 0.4189 |
| %RSD | | 5.8772 | 1.5772 | 1.4769 | 1.3329 | 0.49 | 143.5800 |

**MF9M22-5x** 06/17/2015 15:56:24

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | 99.83% | 0.7258 | 40.3400 | 1397.9000 | 1369.2000 | 1417.1000 | τ16927.0000 | τ2459.5000 | 1719.7000 |
| 2 | 15:57:45 | 102.20% | 0.7307 | 40.3690 | 1390.4000 | 1402.2000 | 1414.1000 | τ16975.0000 | τ2503.0000 | 1768.3000 |
| 3 | 15:58:25 | 100.33% | 0.7393 | 42.3100 | 1440.8000 | 1411.1000 | 1450.0000 | τ17106.0000 | τ2513.0000 | 1761.7000 |
| 4 | 15:59:06 | 100.72% | 0.7373 | 41.7810 | 1431.6000 | 1415.1000 | 1441.6000 | τ17132.0000 | τ2497.9000 | 1755.4000 |
| 5 | 15:59:46 | 101.95% | 0.7639 | 40.8580 | τ1451.2000 | 1400.2000 | 1412.0000 | τ17034.0000 | τ2498.2000 | 1734.5000 |
| x | | 101.01% | 0.7394 | 41.1320 | τ1422.4000 | 1399.6000 | 1427.0000 | τ17035.0000 | τ2494.3000 | 1747.9000 |
| %RSD | | 1.02 | 1.9915 | 2.1380 | τ1.8872 | 1.2890 | 1.2311 | τ0.5059 | τ0.8176 | 1.1582 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | 103.78% | 19.5440 | 33.0010 | 21.4180 | 14910.0000 | 141.7800 | τ15351.0000 | 14712.0000 | 5.7451 |
| 2 | 15:57:45 | 104.30% | 19.6070 | 32.7750 | 21.2730 | 15037.0000 | 145.6000 | τ15458.0000 | 14756.0000 | 5.7887 |
| 3 | 15:58:25 | 105.50% | 19.9500 | 32.5020 | 21.4780 | 14985.0000 | 143.9900 | τ15480.0000 | 14753.0000 | 5.8982 |
| 4 | 15:59:06 | 106.43% | 19.6560 | 32.8660 | 21.0660 | 15013.0000 | 143.3000 | τ15307.0000 | 14779.0000 | 5.7828 |
| 5 | 15:59:46 | 106.53% | 19.4420 | 32.4920 | 21.6010 | 15021.0000 | 143.8300 | τ15403.0000 | 14679.0000 | 5.7907 |
| x | | 105.31% | 19.6400 | 32.7270 | 21.3670 | 14993.0000 | 143.7000 | τ15400.0000 | 14736.0000 | 5.8011 |
| %RSD | | 1.18 | 0.9722 | 0.6869 | 0.9633 | 0.3349 | 0.9563 | τ0.4691 | 0.2730 | 0.9888 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | 12.5340 | 12.6510 | 13.1720 | 24.4230 | 2.2360 | 1.3964 | 0.4357 | -1.2208 | 103.05% |
| 2 | 15:57:45 | 12.5230 | 12.6370 | 13.1320 | 24.8400 | 2.1251 | 1.3153 | 0.5971 | 0.1732 | 103.00% |
| 3 | 15:58:25 | 12.1510 | 12.7200 | 13.0430 | 24.6500 | 2.1708 | 0.9880 | 0.4547 | -0.2390 | 106.13% |
| 4 | 15:59:06 | 12.8650 | 12.6810 | 13.1550 | 24.9120 | 2.4430 | 0.7837 | 0.8815 | -1.0635 | 105.80% |
| 5 | 15:59:46 | 12.3940 | 12.5770 | 12.7520 | 24.5700 | 2.2546 | 0.7953 | 0.2033 | -0.4602 | 105.59% |
| x | | 12.4930 | 12.6530 | 13.0510 | 24.6790 | 2.2459 | 1.0557 | 0.5145 | -0.5621 | 104.71% |
| %RSD | | 2.0721 | 0.4180 | 1.3355 | 0.8072 | 5.4184 | 27.2020 | 48.4120 | 103.0100 | 1.48 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.46% | 0.0610 | -1.5747 | 0.0433 |
| 2 | 15:57:45 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.51% | 0.0742 | -0.5167 | 0.0304 |
| 3 | 15:58:25 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.45% | 0.0813 | -0.9857 | 0.0456 |
| 4 | 15:59:06 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.47% | 0.0741 | -0.5899 | 0.0549 |
| 5 | 15:59:46 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.08% | 0.0751 | -1.8612 | 0.0516 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.59% | 0.0732 | -1.1056 | 0.0452 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.28 | 10.1370 | 53.8540 | 20.9410 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | -0.0283 | 0.0576 | 0.0000 | 0.0000 | 0.1488 | 92.3320 | 93.0040 | 97.39% | 0.1748 |
| 2 | 15:57:45 | -0.0577 | 0.0674 | 0.0000 | 0.0000 | 0.0981 | 92.6820 | 96.5700 | 98.29% | 0.1726 |
| 3 | 15:58:25 | -0.0553 | 0.0793 | 0.0000 | 0.0000 | 0.0931 | 93.7850 | 96.7060 | 98.89% | 0.1681 |
| 4 | 15:59:06 | -0.0432 | 0.0550 | 0.0000 | 0.0000 | 0.1185 | 94.3340 | 97.5660 | 99.83% | 0.1664 |
| 5 | 15:59:46 | -0.0155 | 0.0547 | 0.0000 | 0.0000 | 0.0973 | 94.6450 | 98.5810 | 99.52% | 0.1580 |
| x | | -0.0400 | 0.0628 | 0.0000 | 0.0000 | 0.1112 | 93.5550 | 96.4860 | 98.78% | 0.1680 |
| %RSD | | 44.9720 | 16.8350 | 0.0000 | 0.0000 | 20.8890 | 1.0827 | 2.1826 | 0.99 | 3.8619 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 15:57:05 | 0.1766 | 12.4420 | 11.7070 | 12.0190 | 95.95% | -0.5330 |
| 2 | 15:57:45 | 0.1842 | 12.5390 | 11.6260 | 12.0010 | 97.14% | -0.5330 |
| 3 | 15:58:25 | 0.1705 | 12.6000 | 11.7580 | 12.1350 | 97.69% | 0.1486 |
| 4 | 15:59:06 | 0.1694 | 12.8170 | 11.8650 | 12.2870 | 98.98% | 0.1397 |
| 5 | 15:59:46 | 0.1662 | 13.1610 | 11.6430 | 12.2090 | 98.67% | 0.1418 |
| x | | 0.1734 | 12.7110 | 11.7200 | 12.1300 | 97.69% | -0.1272 |
| %RSD | | 4.0964 | 2.2530 | 0.8260 | 1.0062 | 1.25 | 291.2700 |

**MF9M23-5x** 06/17/2015 16:00:48

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | 99.50% | 0.9831 | 46.6480 | 1231.9000 | 1232.3000 | 1225.4000 | τ17221.0000 | τ2323.2000 | 1152.4000 |
| 2 | 16:02:08 | 100.66% | 0.9301 | 47.3260 | 1244.3000 | 1223.3000 | 1247.8000 | τ17383.0000 | τ2353.0000 | 1162.2000 |
| 3 | 16:02:49 | 100.79% | 0.9333 | 47.2810 | 1265.6000 | 1229.0000 | 1266.6000 | τ17490.0000 | τ2380.4000 | 1175.8000 |
| 4 | 16:03:29 | 100.93% | 0.8185 | 46.8800 | 1248.8000 | 1240.8000 | 1249.2000 | τ17393.0000 | τ2361.8000 | 1156.6000 |
| 5 | 16:04:09 | 101.73% | 0.8784 | 45.4080 | 1224.7000 | 1208.0000 | 1233.1000 | τ17034.0000 | τ2291.7000 | 1121.1000 |
| x | | 100.72% | 0.9087 | 46.7090 | 1243.1000 | 1226.7000 | 1244.4000 | τ17304.0000 | τ2342.0000 | 1153.6000 |
| %RSD | | 0.79 | 6.8832 | 1.6702 | 1.2755 | 0.9966 | 1.2805 | τ1.0371 | τ1.4901 | 1.7524 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | 104.69% | 18.5740 | 30.4950 | 21.2840 | 13906.0000 | 47.0860 | τ14482.0000 | 13819.0000 | 4.0015 |
| 2 | 16:02:08 | 105.57% | 19.2190 | 30.7230 | 21.1660 | 14204.0000 | 46.9510 | τ14490.0000 | 13859.0000 | 3.9501 |
| 3 | 16:02:49 | 105.24% | 19.6910 | 31.5880 | 21.7730 | 14288.0000 | 47.6200 | τ14794.0000 | 14100.0000 | 4.1469 |
| 4 | 16:03:29 | 106.17% | 19.3580 | 30.8940 | 21.4330 | 14052.0000 | 46.9170 | τ14566.0000 | 13919.0000 | 4.0495 |
| 5 | 16:04:09 | 105.30% | 18.8850 | 30.5780 | 20.9880 | 13941.0000 | 46.1570 | τ14293.0000 | 13702.0000 | 4.0037 |
| x | | 105.39% | 19.1460 | 30.8560 | 21.3290 | 14078.0000 | 46.9460 | τ14525.0000 | 13880.0000 | 4.0304 |
| %RSD | | 0.51 | 2.2504 | 1.4150 | 1.3938 | 1.1751 | 1.1162 | τ1.2454 | 1.0550 | 1.8370 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | 11.1020 | 11.9630 | 12.3620 | 27.3240 | 2.5656 | 1.0961 | 0.3230 | 0.3530 | 102.51% |
| 2 | 16:02:08 | 10.9260 | 12.3910 | 12.3080 | 27.4150 | 2.4998 | 0.9940 | 0.5941 | -1.6168 | 103.45% |
| 3 | 16:02:49 | 10.6790 | 11.9090 | 12.4680 | 27.9780 | 2.4564 | 0.8486 | 0.1094 | -0.3033 | 104.88% |
| 4 | 16:03:29 | 10.5820 | 12.0090 | 12.4130 | 27.2060 | 2.5706 | 1.2131 | 0.7985 | -1.3536 | 104.08% |
| 5 | 16:04:09 | 10.5410 | 11.9660 | 12.2640 | 27.4280 | 2.6724 | 0.9808 | 0.6722 | -1.6573 | 103.93% |
| x | | 10.7660 | 12.0480 | 12.3630 | 27.4700 | 2.5530 | 1.0265 | 0.4994 | -0.9156 | 103.77% |
| %RSD | | 2.2294 | 1.6200 | 0.6562 | 1.0839 | 3.2107 | 13.2910 | 55.8730 | 97.9570 | 0.84 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.25% | 0.0475 | -1.6498 | 0.0349 |
| 2 | 16:02:08 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.02% | 0.0408 | -1.1328 | 0.0247 |
| 3 | 16:02:49 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.56% | 0.0526 | -0.8986 | 0.0270 |
| 4 | 16:03:29 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.12% | 0.0591 | -1.6487 | 0.0262 |
| 5 | 16:04:09 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.41% | 0.0487 | -0.3670 | 0.0265 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.47% | 0.0497 | -1.1394 | 0.0279 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.92 | 13.5250 | 47.5600 | 14.5000 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | -0.0544 | 0.0478 | 0.0000 | 0.0000 | 0.1174 | 74.6540 | 76.0910 | 97.47% | 0.1646 |
| 2 | 16:02:08 | -0.0648 | 0.0461 | 0.0000 | 0.0000 | 0.0906 | 74.7780 | 78.0620 | 97.76% | 0.1656 |
| 3 | 16:02:49 | -0.1105 | 0.0396 | 0.0000 | 0.0000 | 0.0905 | 75.2800 | 76.5750 | 99.65% | 0.1585 |
| 4 | 16:03:29 | -0.0687 | 0.0490 | 0.0000 | 0.0000 | 0.1039 | 75.3720 | 76.1870 | 98.82% | 0.1723 |
| 5 | 16:04:09 | -0.0996 | 0.0681 | 0.0000 | 0.0000 | 0.0692 | 73.2780 | 75.9130 | 97.98% | 0.1699 |
| x | | -0.0796 | 0.0501 | 0.0000 | 0.0000 | 0.0943 | 74.6720 | 76.5650 | 98.34% | 0.1662 |
| %RSD | | 30.3110 | 21.2640 | 0.0000 | 0.0000 | 19.0030 | 1.1233 | 1.1374 | 0.91 | 3.1954 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:01:28 | 0.1716 | 6.9916 | 6.3757 | 6.6926 | 96.91% | 0.1541 |
| 2 | 16:02:08 | 0.1561 | 7.0382 | 6.4112 | 6.7387 | 96.56% | 0.1565 |
| 3 | 16:02:49 | 0.1541 | 7.1141 | 6.3286 | 6.6971 | 98.33% | 0.8213 |
| 4 | 16:03:29 | 0.1615 | 7.0724 | 6.2470 | 6.6966 | 97.23% | 0.1518 |
| 5 | 16:04:09 | 0.1512 | 7.1690 | 6.3194 | 6.6294 | 97.76% | -0.5330 |
| x | | 0.1589 | 7.0771 | 6.3364 | 6.6909 | 97.36% | 0.1501 |
| %RSD | | 5.0477 | 0.9650 | 0.9819 | 0.5855 | 0.72 | 318.9500 |

**MF9M24-5x** 06/17/2015 16:05:11

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | 100.14% | 0.8148 | 51.9840 | ↹1614.6000 | 1524.5000 | 1557.4000 | ↹18847.0000 | ↹3103.6000 | 757.4400 |
| 2 | 16:06:32 | 101.03% | 0.8300 | 51.9980 | ↹1610.6000 | 1552.9000 | 1573.0000 | ↹18971.0000 | ↹3144.4000 | 764.1500 |
| 3 | 16:07:12 | 101.12% | 0.7939 | 51.5310 | ↹1621.0000 | 1553.2000 | 1576.3000 | ↹18718.0000 | ↹3091.1000 | 743.8700 |
| 4 | 16:07:52 | 100.92% | 0.8464 | 51.8910 | ↹1585.5000 | 1537.4000 | 1545.8000 | ↹18521.0000 | ↹3126.5000 | 757.6100 |
| 5 | 16:08:32 | 100.60% | 0.7179 | 49.4340 | ↹1550.8000 | 1490.6000 | 1504.6000 | ↹18186.0000 | ↹2994.4000 | 737.2400 |
| x | | 100.76% | 0.8006 | 51.3680 | ↹1596.5000 | 1531.7000 | 1551.4000 | ↹18649.0000 | ↹3092.0000 | 752.0600 |
| %RSD | | 0.40 | 6.2595 | 2.1368 | ↹1.8079 | 1.6911 | 1.8631 | ↹1.6489 | ↹1.8856 | 1.4758 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | 104.41% | 19.9600 | 40.3650 | 24.4070 | 17318.0000 | 74.8450 | ↹17965.0000 | 17039.0000 | 5.0166 |
| 2 | 16:06:32 | 104.09% | 20.0680 | 41.2280 | 24.7970 | 17582.0000 | 75.7830 | ↹18087.0000 | 17428.0000 | 5.1827 |
| 3 | 16:07:12 | 105.80% | 20.3100 | 41.1870 | 24.5690 | 17507.0000 | 74.3510 | ↹17925.0000 | 17119.0000 | 5.1652 |
| 4 | 16:07:52 | 105.81% | 19.5970 | 40.3950 | 24.0110 | 17266.0000 | 73.9530 | ↹17664.0000 | 16743.0000 | 5.1371 |
| 5 | 16:08:32 | 105.56% | 19.3700 | 39.2110 | 23.5300 | 16893.0000 | 72.5590 | ↹17342.0000 | 16616.0000 | 4.9813 |
| x | | 105.13% | 19.8610 | 40.4770 | 24.2630 | 17313.0000 | 74.2980 | ↹17796.0000 | 16989.0000 | 5.0966 |
| %RSD | | 0.78 | 1.8924 | 2.0257 | 2.0606 | 1.5515 | 1.5996 | ↹1.6700 | 1.8879 | 1.7946 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | 15.1680 | 12.5220 | 12.6070 | 31.4810 | 3.9850 | 1.3706 | 0.6602 | -0.4587 | 103.30% |
| 2 | 16:06:32 | 14.9610 | 12.8760 | 13.1210 | 32.2310 | 3.9172 | 1.4026 | 0.4998 | -0.7690 | 103.14% |
| 3 | 16:07:12 | 15.3420 | 12.8050 | 13.0740 | 32.4590 | 3.7570 | 0.6823 | -0.1153 | 1.2849 | 102.94% |
| 4 | 16:07:52 | 14.7140 | 12.3670 | 12.4540 | 31.5080 | 4.0593 | 1.0603 | 0.4609 | -1.4568 | 104.53% |
| 5 | 16:08:32 | 14.7270 | 12.2070 | 12.4360 | 30.9410 | 3.7001 | 1.0462 | 0.1270 | 0.4556 | 103.26% |
| x | | 14.9820 | 12.5550 | 12.7380 | 31.7240 | 3.8837 | 1.1124 | 0.3265 | -0.1888 | 103.43% |
| %RSD | | 1.8320 | 2.2636 | 2.6288 | 1.9407 | 3.9048 | 26.3210 | 96.1820 | 568.3100 | 0.61 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.44% | 0.0574 | -1.1748 | 0.0427 |
| 2 | 16:06:32 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.45% | 0.0644 | -1.3857 | 0.0428 |
| 3 | 16:07:12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.31% | 0.0638 | -0.9383 | 0.0474 |
| 4 | 16:07:52 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.34% | 0.0728 | -1.1637 | 0.0433 |
| 5 | 16:08:32 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.70% | 0.0603 | -1.2520 | 0.0328 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.45% | 0.0637 | -1.1829 | 0.0418 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.83 | 9.1123 | 13.7730 | 12.9360 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | -0.0803 | 0.0694 | 0.0000 | 0.0000 | 0.0973 | 90.1940 | 94.0390 | 98.36% | 0.1835 |
| 2 | 16:06:32 | 0.0224 | 0.0917 | 0.0000 | 0.0000 | 0.0605 | 91.9480 | 95.5280 | 97.63% | 0.1737 |
| 3 | 16:07:12 | -0.1049 | 0.0796 | 0.0000 | 0.0000 | 0.0816 | 92.8540 | 94.9580 | 96.70% | 0.1852 |
| 4 | 16:07:52 | -0.0303 | 0.0548 | 0.0000 | 0.0000 | 0.0747 | 91.9600 | 93.7550 | 97.95% | 0.1921 |
| 5 | 16:08:32 | -0.0504 | 0.1041 | 0.0000 | 0.0000 | 0.0835 | 87.3800 | 91.4010 | 98.27% | 0.1627 |
| x | | -0.0487 | 0.0799 | 0.0000 | 0.0000 | 0.0795 | 90.8670 | 93.9360 | 97.78% | 0.1794 |
| %RSD | | 100.3900 | 23.9680 | 0.0000 | 0.0000 | 16.8900 | 2.3936 | 1.6872 | 0.68 | 6.3794 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:05:51 | 0.1861 | 11.0150 | 9.8706 | 10.4880 | 96.72% | -0.5330 |
| 2 | 16:06:32 | 0.2004 | 11.1940 | 10.1890 | 10.6420 | 96.57% | 0.1564 |
| 3 | 16:07:12 | 0.1934 | 11.2120 | 10.2040 | 10.6280 | 96.01% | 0.8540 |
| 4 | 16:07:52 | 0.1897 | 11.1870 | 9.9504 | 10.4810 | 97.06% | -0.5330 |
| 5 | 16:08:32 | 0.1888 | 10.6970 | 9.7227 | 10.1890 | 98.00% | 0.1464 |
| x | | 0.1917 | 11.0610 | 9.9873 | 10.4860 | 96.87% | 0.0182 |
| %RSD | | 2.8707 | 1.9735 | 2.0798 | 1.7379 | 0.76 | 3189.9000 |

**MF9M25-5x** 06/17/2015 16:09:35

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 100.15% | 0.8054 | 57.4110 | ↹1537.6000 | 1448.6000 | 1495.6000 | ↹16155.0000 | ↹2022.4000 | 2185.4000 |
| 2 | 16:10:55 | 101.28% | 0.7751 | 57.0420 | ↹1523.2000 | 1491.3000 | 1481.8000 | ↹16056.0000 | ↹2043.8000 | 2214.3000 |
| 3 | 16:11:35 | 102.64% | 0.7339 | 57.0670 | ↹1519.6000 | 1470.6000 | 1479.4000 | ↹15831.0000 | ↹2028.7000 | 2182.2000 |
| 4 | 16:12:15 | 101.05% | 0.7488 | 57.8210 | 1499.0000 | 1457.1000 | 1505.9000 | ↹15841.0000 | ↹2026.9000 | 2145.6000 |
| 5 | 16:12:56 | 101.01% | 0.7055 | 55.1470 | 1445.9000 | 1409.8000 | 1450.0000 | ↹15440.0000 | ↹1958.8000 | 2115.3000 |
| x | | 101.23% | 0.7537 | 56.8970 | ↹1505.1000 | 1455.5000 | 1482.5000 | ↹15865.0000 | ↹2016.1000 | 2168.6000 |
| %RSD | | 0.89 | 5.0831 | 1.8075 | ↹2.3798 | 2.0763 | 1.4253 | ↹1.7339 | ↹1.6400 | 1.7756 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 103.69% | 9.3996 | 32.0730 | 19.3990 | 13786.0000 | 147.7200 | ↹14136.0000 | 13521.0000 | 4.3811 |
| 2 | 16:10:55 | 105.37% | 9.5218 | 31.4470 | 19.4890 | 13716.0000 | 149.0200 | ↹14232.0000 | 13617.0000 | 4.4136 |
| 3 | 16:11:35 | 105.27% | 9.5970 | 31.6440 | 19.6580 | 13771.0000 | 149.7400 | ↹14232.0000 | 13568.0000 | 4.4597 |
| 4 | 16:12:15 | 106.21% | 9.3870 | 31.7350 | 19.2830 | 13600.0000 | 147.7100 | ↹14102.0000 | 13446.0000 | 4.3218 |
| 5 | 16:12:56 | 105.40% | 9.2706 | 30.6880 | 18.9740 | 13290.0000 | 143.6900 | ↹13787.0000 | 13265.0000 | 4.3592 |
| x | | 105.19% | 9.4352 | 31.5180 | 19.3610 | 13633.0000 | 147.5700 | ↹14098.0000 | 13483.0000 | 4.3871 |
| %RSD | | 0.87 | 1.3444 | 1.6366 | 1.3219 | 1.5030 | 1.5858 | ↹1.2980 | 1.0197 | 1.1985 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 10.6580 | 10.4760 | 10.9230 | 41.8880 | 2.5169 | 0.4538 | 1.0565 | -0.8940 | 102.45% |
| 2 | 16:10:55 | 10.7950 | 10.7920 | 11.0540 | 41.6640 | 2.7835 | 0.7473 | 0.8685 | -1.4753 | 103.38% |
| 3 | 16:11:35 | 10.5690 | 10.8080 | 10.9160 | 40.6520 | 2.5164 | 1.1305 | 0.1567 | 0.1295 | 105.12% |
| 4 | 16:12:15 | 10.3170 | 10.7250 | 10.6160 | 41.6050 | 2.6843 | 0.9213 | 0.9062 | -1.3416 | 104.64% |
| 5 | 16:12:56 | 10.3380 | 10.4930 | 10.7150 | 39.8400 | 2.4244 | 0.9356 | 0.2055 | -0.5381 | 104.59% |
| x | | 10.5350 | 10.6590 | 10.8450 | 41.1300 | 2.5851 | 0.8377 | 0.6387 | -0.8239 | 104.04% |
| %RSD | | 1.9603 | 1.5231 | 1.6252 | 2.0980 | 5.6187 | 30.3110 | 66.3790 | 78.8420 | 1.05 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.77% | 0.0410 | -0.6949 | 0.0222 |
| 2 | 16:10:55 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.70% | 0.0550 | -1.9402 | 0.0317 |
| 3 | 16:11:35 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.67% | 0.0511 | -1.4862 | 0.0357 |
| 4 | 16:12:15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.70% | 0.0499 | -0.9941 | 0.0303 |
| 5 | 16:12:56 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 99.03% | 0.0520 | -1.5747 | 0.0365 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.17% | 0.0498 | -1.3380 | 0.0313 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.39 | 10.5900 | 36.8510 | 18.2970 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 0.0525 | 0.1362 | 0.0000 | 0.0000 | 0.0457 | 101.4300 | 104.8000 | 97.12% | 0.1551 |
| 2 | 16:10:55 | 0.1116 | 0.1653 | 0.0000 | 0.0000 | 0.0604 | 102.3700 | 105.2800 | 97.49% | 0.1427 |
| 3 | 16:11:35 | 0.0856 | 0.1751 | 0.0000 | 0.0000 | 0.0457 | 101.7300 | 103.7000 | 99.42% | 0.1578 |
| 4 | 16:12:15 | -0.0005 | 0.1517 | 0.0000 | 0.0000 | 0.0496 | 100.2300 | 104.7400 | 98.28% | 0.1542 |
| 5 | 16:12:56 | 0.0853 | 0.1635 | 0.0000 | 0.0000 | 0.0558 | 99.6540 | 101.3300 | 98.81% | 0.1381 |
| x | | 0.0669 | 0.1584 | 0.0000 | 0.0000 | 0.0514 | 101.0800 | 103.9700 | 98.23% | 0.1496 |
| %RSD | | 64.4140 | 9.4128 | 0.0000 | 0.0000 | 12.6070 | 1.1021 | 1.5224 | 0.96 | 5.7770 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:10:15 | 0.1375 | 14.7350 | 13.1670 | 13.9360 | 95.33% | 0.1655 |
| 2 | 16:10:55 | 0.1487 | 14.7220 | 13.5110 | 13.9840 | 96.23% | 0.8508 |
| 3 | 16:11:35 | 0.1519 | 14.9200 | 13.3980 | 14.0210 | 97.34% | 0.1511 |
| 4 | 16:12:15 | 0.1472 | 14.5910 | 13.2480 | 13.7450 | 97.65% | -0.5330 |
| 5 | 16:12:56 | 0.1502 | 14.6740 | 13.1430 | 13.6230 | 98.20% | -0.5330 |
| x | | 0.1471 | 14.7280 | 13.2940 | 13.8620 | 96.95% | 0.0202 |
| %RSD | | 3.8409 | 0.8219 | 1.1836 | 1.2304 | 1.19 | 2859.4000 |

**MF9M26-5X** 06/17/2015 16:13:58

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | 100.90% | 1.2992 | 176.4100 | ↹3858.0000 | 3687.1000 | 3775.9000 | ↹41201.0000 | ↹5070.5000 | 6131.1000 |
| 2 | 16:15:19 | 99.75% | 1.4110 | 182.1700 | ↹3886.1000 | 3725.0000 | 3806.7000 | ↹42130.0000 | ↹5150.7000 | 6101.0000 |
| 3 | 16:15:59 | 100.91% | 1.3120 | 183.5900 | ↹3904.9000 | 3729.9000 | 3881.1000 | ↹41985.0000 | ↹5159.0000 | 6111.6000 |
| 4 | 16:16:39 | 100.88% | 1.3926 | 184.8900 | ↹3914.1000 | 3749.4000 | 3805.8000 | ↹42036.0000 | ↹5090.2000 | 6166.2000 |
| 5 | 16:17:19 | 100.52% | 1.3154 | 184.8000 | ↹3945.1000 | 3805.8000 | 3862.9000 | ↹41874.0000 | ↹5086.9000 | 6135.8000 |
| x | | 100.59% | 1.3460 | 182.3700 | ↹3901.7000 | 3739.4000 | 3826.5000 | ↹41845.0000 | ↹5111.5000 | 6129.2000 |
| %RSD | | 0.49 | 3.8394 | 1.9248 | ↹0.8301 | 1.1618 | 1.1462 | ↹0.8887 | ↹0.7902 | 0.4091 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | 104.69% | 24.0690 | 64.4350 | 42.2010 | ↹32159.0000 | 313.4400 | ↹32351.0000 | 31411.0000 | 9.1903 |
| 2 | 16:15:19 | 106.04% | 23.9820 | 64.5460 | 42.5910 | ↹32253.0000 | 313.9400 | ↹32773.0000 | 31712.0000 | 9.2363 |
| 3 | 16:15:59 | 107.05% | 23.7370 | 64.8290 | 42.2470 | ↹32293.0000 | 314.7200 | ↹32727.0000 | 31817.0000 | 9.3120 |
| 4 | 16:16:39 | 106.72% | 24.7400 | 65.6950 | 42.4560 | ↹32595.0000 | 313.5200 | ↹32732.0000 | 31606.0000 | 9.2765 |
| 5 | 16:17:19 | 107.23% | 24.0380 | 64.6120 | 42.6990 | ↹32623.0000 | 313.7900 | ↹32601.0000 | 31671.0000 | 9.3134 |
| x | | 106.35% | 24.1130 | 64.8230 | 42.4390 | ↹32385.0000 | 313.8800 | ↹32637.0000 | 31643.0000 | 9.2657 |
| %RSD | | 0.97 | 1.5497 | 0.7836 | 0.5066 | ↹0.6510 | 0.1626 | ↹0.5287 | 0.4771 | 0.5683 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | 25.6640 | 17.3720 | 17.9980 | 38.9640 | 5.1280 | 0.7330 | 0.0148 | 0.3074 | 101.10% |
| 2 | 16:15:19 | 25.3550 | 17.6260 | 17.7480 | 38.5680 | 5.3824 | 1.1102 | 0.3419 | 1.4749 | 101.31% |
| 3 | 16:15:59 | 26.2110 | 17.4060 | 17.8810 | 38.7860 | 5.1228 | 0.5588 | 0.3026 | -0.7425 | 103.75% |
| 4 | 16:16:39 | 26.3420 | 17.4100 | 17.8430 | 38.5980 | 5.3172 | 1.1706 | 0.4664 | -0.2538 | 102.90% |
| 5 | 16:17:19 | 26.2420 | 17.3270 | 18.4410 | 39.2450 | 5.0742 | 0.8706 | 0.1275 | 0.0336 | 102.62% |
| x | | 25.9630 | 17.4280 | 17.9820 | 38.8320 | 5.2049 | 0.8886 | 0.2506 | 0.1639 | 102.34% |
| %RSD | | 1.6591 | 0.6632 | 1.5106 | 0.7219 | 2.6100 | 28.7950 | 71.4820 | 506.0200 | 1.09 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.43% | 0.0751 | -1.5321 | 0.0389 |
| 2 | 16:15:19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.36% | 0.0840 | -1.8360 | 0.0537 |
| 3 | 16:15:59 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.46% | 0.0780 | -2.0908 | 0.0499 |
| 4 | 16:16:39 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.46% | 0.1004 | -1.9695 | 0.0525 |
| 5 | 16:17:19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.77% | 0.0928 | -2.2427 | 0.0412 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.70% | 0.0860 | -1.9342 | 0.0473 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.48 | 12.1870 | 13.9750 | 14.2750 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | -0.0949 | 0.1093 | 0.0000 | 0.0000 | 0.0448 | 182.1000 | 188.7100 | 95.57% | 0.3131 |
| 2 | 16:15:19 | -0.1037 | 0.0601 | 0.0000 | 0.0000 | 0.0449 | 189.8800 | 195.3000 | 95.10% | 0.3059 |
| 3 | 16:15:59 | -0.0836 | 0.0948 | 0.0000 | 0.0000 | 0.0657 | 188.0500 | 192.0800 | 96.65% | 0.3363 |
| 4 | 16:16:39 | -0.1019 | 0.0911 | 0.0000 | 0.0000 | 0.0429 | 186.6200 | 193.0100 | 96.97% | 0.3336 |
| 5 | 16:17:19 | -0.0535 | 0.0836 | 0.0000 | 0.0000 | 0.0428 | 187.5300 | 194.5300 | 96.60% | 0.2846 |
| x | | -0.0875 | 0.0878 | 0.0000 | 0.0000 | 0.0482 | 186.8400 | 192.7200 | 96.18% | 0.3147 |
| %RSD | | 23.5010 | 20.5790 | 0.0000 | 0.0000 | 20.3040 | 1.5524 | 1.3357 | 0.83 | 6.7550 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:14:38 | 0.3160 | 17.3340 | 16.2670 | 16.7060 | 93.36% | -0.5330 |
| 2 | 16:15:19 | 0.3225 | 17.8140 | 16.2670 | 16.8280 | 93.86% | -0.5330 |
| 3 | 16:15:59 | 0.3208 | 17.8420 | 16.2230 | 16.8490 | 95.15% | 0.8666 |
| 4 | 16:16:39 | 0.3104 | 18.0870 | 16.2630 | 16.9960 | 93.79% | -0.5330 |
| 5 | 16:17:19 | 0.3123 | 17.8480 | 16.4040 | 16.8370 | 94.13% | 0.1743 |
| x | | 0.3164 | 17.7850 | 16.2850 | 16.8430 | 94.06% | -0.1116 |
| %RSD | | 1.6568 | 1.5458 | 0.4233 | 0.6118 | 0.71 | 561.4300 |

**MF9M27-5x** 06/17/2015 16:18:20

User.Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | 100.39% | 1.7944 | 142.2600 | ┬3817.4000 | 3683.9000 | 3702.0000 | ┬37921.0000 | ┬3728.8000 | 2522.6000 |
| 2 | 16:19:41 | 101.43% | 1.7201 | 147.5600 | ┬3889.5000 | 3733.4000 | 3814.1000 | ┬38147.0000 | ┬3822.6000 | 2588.4000 |
| 3 | 16:20:21 | 101.19% | 1.8443 | 146.0600 | ┬3969.1000 | 3784.4000 | 3824.1000 | ┬37915.0000 | ┬3801.4000 | 2562.1000 |
| 4 | 16:21:01 | 101.90% | 1.7094 | 146.8800 | ┬3939.7000 | 3727.6000 | 3808.0000 | ┬37725.0000 | ┬3810.6000 | 2578.8000 |
| 5 | 16:21:42 | 103.00% | 1.7681 | 140.3700 | ┬3793.4000 | 3644.8000 | 3756.2000 | ┬37411.0000 | ┬3676.3000 | 2551.3000 |
| x | | 101.58% | 1.7672 | 144.6200 | ┬3881.8000 | 3714.8000 | 3780.9000 | ┬37824.0000 | ┬3767.9000 | 2560.6000 |
| %RSD | | 0.95 | 3.1306 | 2.1704 | ┬1.9531 | 1.4253 | 1.3580 | ┬0.7273 | ┬1.6715 | 1.0023 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | 104.57% | 15.6860 | 59.1240 | 45.6830 | ┬33200.0000 | 272.0400 | ┬33245.0000 | 32286.0000 | 12.9760 |
| 2 | 16:19:41 | 105.11% | 16.4170 | 59.4040 | 46.3770 | ┬33502.0000 | 275.5900 | ┬33743.0000 | 32548.0000 | 13.1480 |
| 3 | 16:20:21 | 107.69% | 16.3300 | 60.1880 | 45.6560 | ┬32932.0000 | 274.2200 | ┬33411.0000 | 32544.0000 | 13.2050 |
| 4 | 16:21:01 | 106.56% | 16.0910 | 59.6840 | 45.3780 | ┬33081.0000 | 273.0700 | ┬33455.0000 | 32019.0000 | 13.2320 |
| 5 | 16:21:42 | 107.29% | 15.9740 | 58.8690 | 45.5240 | ┬32828.0000 | 269.5600 | ┬32950.0000 | 31865.0000 | 13.1210 |
| x | | 106.24% | 16.1000 | 59.4540 | 45.7230 | ┬33109.0000 | 272.8900 | ┬33361.0000 | 32252.0000 | 13.1360 |
| %RSD | | 1.28 | 1.8130 | 0.8598 | 0.8421 | ┬0.7907 | 0.8383 | ┬0.8732 | 0.9532 | 0.7608 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | 27.3950 | 16.5330 | 16.6680 | 38.5850 | 4.9526 | 0.4824 | 0.4880 | -0.6544 | 105.89% |
| 2 | 16:19:41 | 27.3490 | 16.2290 | 16.7050 | 38.9530 | 5.3678 | 0.6418 | 0.7021 | -1.0352 | 107.09% |
| 3 | 16:20:21 | 27.3710 | 16.7930 | 17.3150 | 39.1980 | 5.3227 | 0.5339 | 0.4649 | -1.2168 | 107.25% |
| 4 | 16:21:01 | 27.5180 | 16.6190 | 16.7060 | 38.3690 | 5.4818 | 0.9811 | 0.9056 | -0.5779 | 106.78% |
| 5 | 16:21:42 | 27.3330 | 16.3440 | 16.4180 | 38.4810 | 5.1255 | 0.3945 | 0.1846 | -0.0509 | 107.17% |
| x | | 27.3930 | 16.5040 | 16.7620 | 38.7170 | 5.2501 | 0.6067 | 0.5490 | -0.7070 | 106.84% |
| %RSD | | 0.2684 | 1.3492 | 1.9787 | 0.8964 | 4.0050 | 37.5080 | 49.3930 | 63.9430 | 0.52 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.29% | 0.0659 | -2.2598 | 0.0395 |
| 2 | 16:19:41 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.79% | 0.0547 | -2.6841 | 0.0443 |
| 3 | 16:20:21 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.85% | 0.0776 | -2.1461 | 0.0402 |
| 4 | 16:21:01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.83% | 0.0684 | -2.2261 | 0.0408 |
| 5 | 16:21:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.48% | 0.0784 | -1.3296 | 0.0312 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.65% | 0.0690 | -2.1291 | 0.0392 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.26 | 14.0380 | 23.1760 | 12.2890 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | -0.0174 | 0.1084 | 0.0000 | 0.0000 | 0.0415 | 189.4400 | 193.4200 | 96.09% | 0.2884 |
| 2 | 16:19:41 | 0.0385 | 0.1087 | 0.0000 | 0.0000 | 0.0528 | 193.1600 | 197.1000 | 96.27% | 0.2666 |
| 3 | 16:20:21 | 0.0052 | 0.1026 | 0.0000 | 0.0000 | 0.0545 | 194.7100 | 200.2800 | 96.10% | 0.2940 |
| 4 | 16:21:01 | -0.0338 | 0.0687 | 0.0000 | 0.0000 | 0.0497 | 191.3100 | 198.1400 | 95.34% | 0.3039 |
| 5 | 16:21:42 | -0.0463 | 0.0866 | 0.0000 | 0.0000 | 0.0462 | 189.2300 | 196.4500 | 97.03% | 0.2508 |
| x | | -0.0108 | 0.0950 | 0.0000 | 0.0000 | 0.0489 | 191.5700 | 197.0800 | 96.17% | 0.2807 |
| %RSD | | 312.2100 | 18.1120 | 0.0000 | 0.0000 | 10.7410 | 1.2372 | 1.2722 | 0.63 | 7.6896 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:19:00 | 0.2891 | 20.7510 | 18.7190 | 19.5820 | 94.52% | -0.5330 |
| 2 | 16:19:41 | 0.2963 | 20.8880 | 19.2100 | 19.8700 | 94.13% | 0.1744 |
| 3 | 16:20:21 | 0.3018 | 21.8300 | 19.4540 | 20.1470 | 93.98% | -0.5330 |
| 4 | 16:21:01 | 0.2960 | 21.1760 | 19.0290 | 19.9450 | 94.13% | 0.1744 |
| 5 | 16:21:42 | 0.2847 | 21.0120 | 18.8370 | 19.5350 | 94.73% | 0.1698 |
| x | | 0.2936 | 21.1310 | 19.0500 | 19.8160 | 94.30% | -0.1095 |
| %RSD | | 2.2833 | 1.9926 | 1.5394 | 1.2927 | 0.33 | 353.0900 |

**MF9M27S-5x** 06/17/2015 16:22:43

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 101.03% | 11.3710 | 157.0100 | ↹3936.9000 | 3734.1000 | 3810.5000 | ↹37945.0000 | ↹4498.8000 | 8196.0000 |
| 2 | 16:24:03 | 100.23% | 11.5230 | 158.7800 | ↹3994.9000 | 3825.8000 | 3857.3000 | ↹37981.0000 | ↹4564.2000 | 8220.7000 |
| 3 | 16:24:44 | 100.14% | 11.9100 | 159.6300 | ↹4015.1000 | 3785.1000 | 3824.7000 | ↹37737.0000 | ↹4533.0000 | 8292.8000 |
| 4 | 16:25:24 | 100.66% | 11.5490 | 159.8600 | ↹3922.5000 | 3809.3000 | 3873.8000 | ↹37602.0000 | ↹4552.1000 | 8281.6000 |
| 5 | 16:26:04 | 99.70% | 11.4750 | 155.1200 | ↹3884.9000 | 3739.3000 | 3792.0000 | ↹37486.0000 | ↹4490.3000 | 8089.9000 |
| x | | 100.35% | 11.5660 | 158.0800 | ↹3950.9000 | 3778.7000 | 3831.7000 | ↹37750.0000 | ↹4527.7000 | 8216.2000 |
| %RSD | | 0.51 | 1.7659 | 1.2637 | ↹1.3520 | 1.0863 | 0.8756 | ↹0.5669 | ↹0.7154 | 0.9910 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 104.44% | 32.4310 | 169.2200 | 79.9500 | ↹32505.0000 | ↹368.0300 | ↹32484.0000 | 31398.0000 | 104.9000 |
| 2 | 16:24:03 | 104.48% | 32.5400 | 171.2600 | 80.5900 | ↹32587.0000 | 371.5500 | ↹33020.0000 | 32009.0000 | 105.8900 |
| 3 | 16:24:44 | 105.74% | 33.3570 | 172.0000 | 79.7870 | ↹32809.0000 | 366.1500 | ↹32865.0000 | 31643.0000 | 105.7400 |
| 4 | 16:25:24 | 105.85% | 31.9370 | 167.2600 | 79.5410 | ↹32412.0000 | 362.4600 | ↹32227.0000 | 31059.0000 | 104.4600 |
| 5 | 16:26:04 | 104.00% | 31.7350 | 166.9600 | 78.8860 | ↹32163.0000 | 359.6500 | ↹32209.0000 | 30913.0000 | 101.9900 |
| x | | 104.90% | 32.4000 | 169.3400 | 79.7510 | ↹32495.0000 | ↹365.5700 | ↹32561.0000 | 31404.0000 | 104.5900 |
| %RSD | | 0.80 | 1.9467 | 1.3450 | 0.7772 | ↹0.7286 | ↹1.2752 | ↹1.1330 | 1.4099 | 1.5028 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 116.6700 | 65.7190 | 66.9530 | 126.5900 | 12.7390 | 16.9360 | 16.9110 | 0.0035 | 103.95% |
| 2 | 16:24:03 | 116.5800 | 65.6860 | 67.2920 | 128.4900 | 13.4910 | 16.1880 | 16.5060 | -0.4248 | 103.61% |
| 3 | 16:24:44 | 117.5600 | 65.8620 | 67.1150 | 126.2800 | 12.6490 | 16.2050 | 16.9720 | -1.3261 | 103.85% |
| 4 | 16:25:24 | 117.2800 | 65.2210 | 66.7890 | 128.3500 | 13.4210 | 16.8250 | 16.9940 | -1.3884 | 103.09% |
| 5 | 16:26:04 | 115.4200 | 63.7670 | 64.7690 | 125.0500 | 12.6620 | 16.6540 | 16.6040 | -0.1891 | 103.33% |
| x | | 116.7000 | 65.2510 | 66.5830 | 126.9500 | 12.9920 | 16.5620 | 16.7980 | -0.6650 | 103.57% |
| %RSD | | 0.7068 | 1.3238 | 1.5493 | 1.1482 | 3.2765 | 2.1020 | 1.3463 | 97.7890 | 0.35 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.21% | 9.6616 | -1.8874 | 9.6396 |
| 2 | 16:24:03 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.71% | 9.9410 | -2.8990 | 9.7590 |
| 3 | 16:24:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.05% | 9.8500 | -2.9354 | 9.7941 |
| 4 | 16:25:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.03% | 9.7708 | -2.4138 | 9.9462 |
| 5 | 16:26:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.54% | 9.5001 | -0.6472 | 9.4331 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.91% | 9.7447 | -2.1565 | 9.7144 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.52 | 1.7552 | 43.8350 | 1.9721 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 9.5361 | 9.6195 | 0.0000 | 0.0000 | 1.4594 | 578.4600 | 594.0200 | 92.99% | 9.8700 |
| 2 | 16:24:03 | 9.4422 | 9.5713 | 0.0000 | 0.0000 | 1.4312 | 574.8900 | 589.7200 | 94.16% | 9.9858 |
| 3 | 16:24:44 | 9.3833 | 9.7595 | 0.0000 | 0.0000 | 1.5179 | 576.2000 | 599.9200 | 93.40% | 9.8991 |
| 4 | 16:25:24 | 9.3594 | 9.5844 | 0.0000 | 0.0000 | 1.4833 | 567.5900 | 589.0600 | 93.91% | 9.9352 |
| 5 | 16:26:04 | 9.0207 | 9.3765 | 0.0000 | 0.0000 | 1.3861 | 556.6400 | 577.1500 | 94.38% | 9.4602 |
| x | | 9.3483 | 9.5823 | 0.0000 | 0.0000 | 1.4556 | 570.7600 | 589.9800 | 93.77% | 9.8301 |
| %RSD | | 2.0905 | 1.4314 | 0.0000 | 0.0000 | 3.4497 | 1.5557 | 1.4197 | 0.61 | 2.1490 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:23:23 | 9.6876 | 43.2520 | 39.4870 | 40.5970 | 91.87% | 0.9166 |
| 2 | 16:24:03 | 9.8050 | 43.3610 | 39.0770 | 40.7120 | 91.23% | 0.1968 |
| 3 | 16:24:44 | 9.8758 | 43.4490 | 40.0420 | 40.8200 | 92.61% | 0.1859 |
| 4 | 16:25:24 | 9.8806 | 43.7810 | 39.2850 | 40.8300 | 92.37% | 3.0711 |
| 5 | 16:26:04 | 9.4906 | 41.8910 | 37.9790 | 39.5150 | 93.10% | 0.8973 |
| x | | 9.7479 | 43.1470 | 39.1740 | 40.4950 | 92.24% | 1.0536 |
| %RSD | | 1.6784 | 1.6903 | 1.9365 | 1.3730 | 0.78 | 112.3100 |

**MF9M27D-5x** 06/17/2015 16:27:07

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | 100.53% | 2.0746 | 189.6800 | τ4786.5000 | 4547.8000 | 4643.8000 | τ48625.0000 | τ5495.2000 | 4170.8000 |
| 2 | 16:28:27 | 100.83% | 2.0983 | 191.2500 | τ4772.4000 | 4578.7000 | 4668.3000 | τ48296.0000 | τ5556.3000 | 4251.5000 |
| 3 | 16:29:08 | 101.86% | 2.1298 | 195.9300 | τ4884.9000 | 4548.9000 | 4705.7000 | τ49044.0000 | τ5551.4000 | 4169.2000 |
| 4 | 16:29:48 | 101.26% | 2.1054 | 192.8600 | τ4834.4000 | 4634.7000 | 4654.0000 | τ48505.0000 | τ5580.5000 | 4227.3000 |
| 5 | 16:30:28 | 102.42% | 2.0906 | 187.4200 | τ4760.0000 | 4503.5000 | 4555.6000 | τ47163.0000 | τ5434.6000 | 4145.6000 |
| x | | 101.38% | 2.0997 | 191.4300 | τ4807.6000 | 4562.7000 | 4645.5000 | τ48327.0000 | τ5523.6000 | 4192.9000 |
| %RSD | | 0.76 | 0.9687 | 1.6826 | τ1.0730 | 1.0599 | 1.1936 | τ1.4600 | τ1.0635 | 1.0605 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | 105.28% | 19.4450 | 78.8040 | 53.3840 | τ39545.0000 | 233.3800 | τ39599.0000 | 38169.0000 | 13.9610 |
| 2 | 16:28:27 | 104.84% | 19.7610 | 80.7860 | 53.9540 | τ39743.0000 | 235.8600 | τ39904.0000 | 38872.0000 | 14.3900 |
| 3 | 16:29:08 | 106.85% | 19.1770 | 80.0670 | 53.5380 | τ39611.0000 | 231.5100 | τ39411.0000 | 37908.0000 | 14.2280 |
| 4 | 16:29:48 | 106.50% | 19.6000 | 79.8060 | 52.5810 | τ39186.0000 | 231.5500 | τ39358.0000 | 38245.0000 | 14.0730 |
| 5 | 16:30:28 | 106.77% | 19.3330 | 79.0630 | 53.2500 | τ39368.0000 | 230.6200 | τ39018.0000 | 38158.0000 | 13.9390 |
| x | | 106.05% | 19.4630 | 79.7050 | 53.3410 | τ39491.0000 | 232.5800 | τ39458.0000 | 38271.0000 | 14.1180 |
| %RSD | | 0.87 | 1.1688 | 0.9987 | 0.9380 | τ0.5502 | 0.8985 | τ0.8256 | 0.9394 | 1.3466 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | 30.4670 | 19.9110 | 20.1970 | 47.7530 | 6.9466 | 0.4706 | 0.3987 | -0.0883 | 104.06% |
| 2 | 16:28:27 | 31.1830 | 20.4710 | 20.2800 | 48.4590 | 6.9979 | 0.9245 | 0.5278 | -0.3329 | 103.95% |
| 3 | 16:29:08 | 31.1840 | 20.2830 | 20.6700 | 48.1800 | 7.3295 | 0.5625 | 0.8466 | 0.6982 | 103.86% |
| 4 | 16:29:48 | 30.8510 | 20.2360 | 20.6990 | 48.5140 | 7.0572 | 0.5531 | 0.9025 | -0.2746 | 105.05% |
| 5 | 16:30:28 | 30.5780 | 19.9260 | 20.5230 | 47.9270 | 6.8834 | 0.9987 | 0.8266 | 0.4356 | 104.47% |
| x | | 30.8530 | 20.1660 | 20.4740 | 48.1670 | 7.0429 | 0.7019 | 0.7004 | 0.0876 | 104.28% |
| %RSD | | 1.0786 | 1.1997 | 1.1073 | 0.6845 | 2.4498 | 34.3630 | 31.8450 | 520.8900 | 0.47 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.90% | 0.0905 | -2.2049 | 0.0523 |
| 2 | 16:28:27 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.10% | 0.1029 | -3.0669 | 0.0517 |
| 3 | 16:29:08 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.80% | 0.1083 | -2.0257 | 0.0535 |
| 4 | 16:29:48 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.70% | 0.1102 | -2.3194 | 0.0673 |
| 5 | 16:30:28 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.53% | 0.0967 | -3.0641 | 0.0512 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.41% | 0.1017 | -2.5362 | 0.0552 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.77 | 8.0124 | 19.4940 | 12.3540 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | -0.0534 | 0.0595 | 0.0000 | 0.0000 | 0.0496 | 284.9000 | 292.6800 | 93.63% | 0.3872 |
| 2 | 16:28:27 | -0.1092 | 0.0890 | 0.0000 | 0.0000 | 0.0326 | 288.7200 | 298.1000 | 93.10% | 0.3863 |
| 3 | 16:29:08 | -0.1911 | 0.0859 | 0.0000 | 0.0000 | 0.0480 | 286.6100 | 294.9700 | 93.29% | 0.3714 |
| 4 | 16:29:48 | -0.0899 | 0.0831 | 0.0000 | 0.0000 | 0.0442 | 283.9800 | 291.2300 | 93.53% | 0.3728 |
| 5 | 16:30:28 | -0.0706 | 0.0648 | 0.0000 | 0.0000 | 0.0252 | 281.1400 | 289.6500 | 94.25% | 0.3609 |
| x | | -0.1028 | 0.0764 | 0.0000 | 0.0000 | 0.0399 | 285.0700 | 293.3300 | 93.56% | 0.3757 |
| %RSD | | 52.1390 | 17.4740 | 0.0000 | 0.0000 | 26.5380 | 0.9980 | 1.1280 | 0.47 | 2.9507 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:27:47 | 0.3637 | 22.5440 | 20.2550 | 20.9660 | 91.34% | 0.1960 |
| 2 | 16:28:27 | 0.3663 | 22.6910 | 20.1660 | 21.0680 | 91.01% | 0.9302 |
| 3 | 16:29:08 | 0.3661 | 22.8660 | 20.1780 | 21.1750 | 91.26% | 0.1966 |
| 4 | 16:29:48 | 0.3818 | 22.5350 | 20.5350 | 21.2160 | 91.66% | -0.5330 |
| 5 | 16:30:28 | 0.3524 | 21.9360 | 19.9510 | 20.6560 | 93.21% | -0.5330 |
| x | | 0.3661 | 22.5140 | 20.2170 | 21.0160 | 91.70% | 0.0513 |
| %RSD | | 2.8659 | 1.5555 | 1.0412 | 1.0643 | 0.96 | 1191.7000 |

**MF9M27A-5x** 06/17/2015 16:31:29

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 99.77% | 11.7750 | ┬4828.3000 | ┬8540.4000 | 8339.3000 | 8452.6000 | ┬37900.0000 | ┬8282.2000 | 7045.6000 |
| 2 | 16:32:50 | 99.53% | 11.7120 | ┬4854.5000 | ┬8661.0000 | 8328.4000 | 8473.7000 | ┬37598.0000 | ┬8300.9000 | 7050.6000 |
| 3 | 16:33:30 | 100.45% | 11.6400 | ┬4986.3000 | ┬8711.1000 | 8325.2000 | 8519.5000 | ┬38355.0000 | ┬8435.9000 | 7086.8000 |
| 4 | 16:34:10 | 100.36% | 11.6450 | ┬4885.8000 | ┬8409.7000 | 8167.5000 | 8498.2000 | ┬37106.0000 | ┬8360.2000 | 7064.9000 |
| 5 | 16:34:51 | 99.93% | 11.1330 | ┬4683.1000 | ┬8447.1000 | 8073.9000 | 8284.1000 | ┬36976.0000 | ┬8025.3000 | 6775.7000 |
| x | | 100.01% | 11.5810 | ┬4847.6000 | ┬8553.8000 | 8246.8000 | 8445.6000 | ┬37587.0000 | ┬8280.9000 | 7004.7000 |
| %RSD | | 0.39 | 2.2151 | ┬2.2633 | ┬1.5309 | 1.4545 | 1.1097 | ┬1.5114 | ┬1.8715 | 1.8419 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 103.57% | 15.8700 | 107.9300 | 63.5330 | ┬34651.0000 | 279.5900 | ┬35300.0000 | 33899.0000 | 21.9130 |
| 2 | 16:32:50 | 104.34% | 16.2910 | 108.6600 | 63.1780 | ┬34819.0000 | 280.4700 | ┬35119.0000 | 34262.0000 | 21.8470 |
| 3 | 16:33:30 | 104.11% | 16.1820 | 109.8900 | 63.7280 | ┬35383.0000 | 284.4700 | ┬35696.0000 | 34629.0000 | 22.1770 |
| 4 | 16:34:10 | 104.78% | 15.9410 | 106.4500 | 63.1150 | ┬34958.0000 | 281.6500 | ┬35023.0000 | 33611.0000 | 21.8810 |
| 5 | 16:34:51 | 104.60% | 15.5150 | 104.8000 | 61.2600 | ┬34008.0000 | 271.9900 | ┬33803.0000 | 32558.0000 | 21.1480 |
| x | | 104.28% | 15.9600 | 107.5500 | 62.9630 | ┬34764.0000 | 279.6300 | ┬34988.0000 | 33792.0000 | 21.7930 |
| %RSD | | 0.45 | 1.8949 | 1.8363 | 1.5645 | ┬1.4445 | 1.6634 | ┬2.0312 | 2.3348 | 1.7605 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 35.9320 | 33.5800 | 34.2210 | 55.1950 | 12.9910 | 42.8500 | 41.3980 | 0.1088 | 103.71% |
| 2 | 16:32:50 | 36.2760 | 34.3080 | 33.9780 | 55.4880 | 13.2050 | 43.5930 | 41.7990 | -0.3964 | 104.00% |
| 3 | 16:33:30 | 37.0590 | 34.4740 | 35.1300 | 55.9120 | 13.3790 | 42.7700 | 43.0020 | 0.1351 | 104.00% |
| 4 | 16:34:10 | 35.5910 | 33.6320 | 34.2080 | 54.8210 | 13.5590 | 42.7860 | 42.0100 | -1.4633 | 103.35% |
| 5 | 16:34:51 | 34.7850 | 32.5000 | 33.3860 | 54.1050 | 12.7530 | 41.8930 | 39.3010 | 2.4534 | 104.38% |
| x | | 35.9290 | 33.6990 | 34.1850 | 55.1040 | 13.1770 | 42.7780 | 41.5020 | 0.1675 | 103.89% |
| %RSD | | 2.3366 | 2.3126 | 1.8364 | 1.2461 | 2.4056 | 1.4087 | 3.2892 | 855.0300 | 0.37 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.60% | 9.9330 | -2.0312 | 9.7582 |
| 2 | 16:32:50 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.06% | 10.0720 | -1.6369 | 9.9645 |
| 3 | 16:33:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.31% | 10.1430 | -2.6340 | 10.0210 |
| 4 | 16:34:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.31% | 10.1160 | -1.4496 | 10.2850 |
| 5 | 16:34:51 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.74% | 9.4383 | -1.6435 | 9.4552 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.41% | 9.9405 | -1.8790 | 9.8967 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.86 | 2.9392 | 25.1270 | 3.1336 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 9.4205 | 9.2099 | 0.0000 | 0.0000 | 18.6220 | 288.7500 | 293.7900 | 93.09% | 9.6286 |
| 2 | 16:32:50 | 9.1579 | 9.7334 | 0.0000 | 0.0000 | 18.3960 | 287.9300 | 296.7000 | 93.75% | 9.7271 |
| 3 | 16:33:30 | 9.4302 | 9.5385 | 0.0000 | 0.0000 | 18.5750 | 288.8400 | 296.4900 | 93.79% | 10.0820 |
| 4 | 16:34:10 | 9.2379 | 9.4432 | 0.0000 | 0.0000 | 17.9690 | 282.9600 | 294.9500 | 94.20% | 9.7368 |
| 5 | 16:34:51 | 8.4487 | 8.8601 | 0.0000 | 0.0000 | 17.5210 | 275.4100 | 282.8200 | 93.90% | 9.6117 |
| x | | 9.1391 | 9.3570 | 0.0000 | 0.0000 | 18.2160 | 284.7800 | 292.9500 | 93.75% | 9.7572 |
| %RSD | | 4.4131 | 3.5871 | 0.0000 | 0.0000 | 2.5610 | 2.0274 | 1.9754 | 0.43 | 1.9470 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:32:09 | 9.5633 | 30.4240 | 28.8310 | 29.1570 | 91.14% | -0.5330 |
| 2 | 16:32:50 | 9.6623 | 30.4020 | 28.8950 | 29.1720 | 92.06% | -0.5330 |
| 3 | 16:33:30 | 9.7666 | 30.8750 | 29.3250 | 29.5960 | 91.78% | -0.5330 |
| 4 | 16:34:10 | 9.6986 | 29.8500 | 28.4200 | 28.9890 | 92.34% | 0.1881 |
| 5 | 16:34:51 | 9.3882 | 29.5860 | 27.4250 | 28.3200 | 91.99% | -0.5330 |
| x | | 9.6158 | 30.2270 | 28.5790 | 29.0470 | 91.86% | -0.3888 |
| %RSD | | 1.5276 | 1.6893 | 2.5219 | 1.5970 | 0.49 | 82.9430 |

**MF9M27L-5x** 06/17/2015 16:35:52

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 100.95% | 0.3533 | 25.6310 | 770.5000 | 761.6800 | 779.6800 | T7800.5000 | 776.0700 | 529.7700 |
| 2 | 16:37:12 | 101.69% | 0.4040 | 26.0480 | 767.9700 | 779.2100 | 786.1200 | T7937.3000 | 801.4600 | 532.4700 |
| 3 | 16:37:53 | 102.49% | 0.3446 | 25.7120 | 786.3900 | 786.6900 | 792.5000 | T8004.6000 | 800.7500 | 541.3200 |
| 4 | 16:38:33 | 102.89% | 0.3866 | 25.5240 | 787.7000 | 784.0900 | 802.9600 | T8071.4000 | 801.8100 | 533.2900 |
| 5 | 16:39:13 | 103.30% | 0.3051 | 24.9840 | 771.7100 | 762.4500 | 776.9400 | T7898.0000 | 786.4000 | 542.6700 |
| x | | 102.26% | 0.3587 | 25.5800 | 776.8500 | 774.8300 | 787.6400 | T7942.4000 | 793.3000 | 535.9000 |
| %RSD | | 0.92 | 10.7320 | 1.5106 | 1.2114 | 1.5432 | 1.3296 | T1.2998 | 1.4630 | 1.0692 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 101.43% | 3.3122 | 12.4310 | 9.6294 | 6725.9000 | 56.6400 | T7135.7000 | 6640.4000 | 2.9098 |
| 2 | 16:37:12 | 101.67% | 3.3517 | 12.5430 | 9.9209 | 6846.8000 | 57.8480 | T7264.2000 | 6825.2000 | 2.8262 |
| 3 | 16:37:53 | 102.88% | 3.3808 | 12.8590 | 9.8895 | 6927.4000 | 57.9210 | T7217.1000 | 6822.1000 | 2.8958 |
| 4 | 16:38:33 | 102.77% | 3.3809 | 12.8640 | 9.7881 | 6938.8000 | 57.2930 | T7289.4000 | 6878.6000 | 2.8982 |
| 5 | 16:39:13 | 103.63% | 3.2161 | 12.6480 | 9.6661 | 6785.2000 | 56.6070 | T7154.8000 | 6733.9000 | 2.8691 |
| x | | 102.48% | 3.3283 | 12.6690 | 9.7788 | 6844.8000 | 57.2620 | T7212.3000 | 6780.0000 | 2.8798 |
| %RSD | | 0.89 | 2.0666 | 1.5143 | 1.3288 | 1.3339 | 1.1027 | T0.9258 | 1.3827 | 1.1629 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 5.8338 | 3.5261 | 3.3966 | 9.3052 | 0.9453 | 0.6928 | -0.5242 | 0.1627 | 98.60% |
| 2 | 16:37:12 | 5.7300 | 3.7248 | 3.8824 | 9.0982 | 1.0809 | 0.8281 | -0.0520 | 1.4206 | 99.05% |
| 3 | 16:37:53 | 5.9052 | 3.7992 | 3.6386 | 9.2729 | 1.2907 | 0.7002 | 0.3529 | -0.4675 | 98.45% |
| 4 | 16:38:33 | 6.1493 | 3.5621 | 3.7687 | 9.4185 | 1.1625 | 0.8075 | -0.0511 | -0.3417 | 100.50% |
| 5 | 16:39:13 | 5.8493 | 3.5234 | 3.7147 | 9.2021 | 1.1385 | 1.1059 | -0.1169 | 0.3970 | 101.06% |
| x | | 5.8935 | 3.6271 | 3.6802 | 9.2594 | 1.1236 | 0.8269 | -0.0783 | 0.2342 | 99.53% |
| %RSD | | 2.6535 | 3.4963 | 4.9367 | 1.2876 | 11.1950 | 20.2590 | 397.7800 | 321.1500 | 1.18 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.94% | 0.0178 | -0.3868 | 0.0092 |
| 2 | 16:37:12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.02% | 0.0149 | -0.7843 | 0.0071 |
| 3 | 16:37:53 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.61% | 0.0109 | -0.5520 | 0.0055 |
| 4 | 16:38:33 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.88% | 0.0156 | -0.4413 | 0.0020 |
| 5 | 16:39:13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.36% | 0.0105 | -0.0030 | 0.0006 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.36% | 0.0139 | -0.4335 | 0.0049 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.41 | 22.6990 | 65.7300 | 72.8180 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 0.0048 | 0.0313 | 0.0000 | 0.0000 | 0.0079 | 38.4790 | 39.7610 | 96.63% | 0.0623 |
| 2 | 16:37:12 | 0.0133 | 0.0021 | 0.0000 | 0.0000 | 0.0145 | 39.4470 | 41.0430 | 96.27% | 0.0652 |
| 3 | 16:37:53 | -0.0296 | 0.0160 | 0.0000 | 0.0000 | 0.0160 | 38.8760 | 39.9320 | 97.10% | 0.0622 |
| 4 | 16:38:33 | -0.0213 | 0.0233 | 0.0000 | 0.0000 | 0.0143 | 40.9430 | 41.4560 | 97.24% | 0.0601 |
| 5 | 16:39:13 | 0.0117 | 0.0192 | 0.0000 | 0.0000 | 0.0176 | 38.6340 | 39.8910 | 97.65% | 0.0671 |
| x | | -0.0042 | 0.0184 | 0.0000 | 0.0000 | 0.0140 | 39.2760 | 40.4170 | 96.98% | 0.0634 |
| %RSD | | 473.7600 | 58.4970 | 0.0000 | 0.0000 | 26.2160 | 2.5505 | 1.9220 | 0.55 | 4.3312 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:36:32 | 0.0607 | 4.1457 | 3.7879 | 3.9076 | 96.61% | -0.5330 |
| 2 | 16:37:12 | 0.0688 | 4.1568 | 3.9742 | 4.0176 | 96.57% | -0.5330 |
| 3 | 16:37:53 | 0.0625 | 4.1857 | 3.8585 | 3.9784 | 98.38% | -0.5330 |
| 4 | 16:38:33 | 0.0617 | 4.2778 | 3.9610 | 4.0658 | 97.19% | 0.1521 |
| 5 | 16:39:13 | 0.0615 | 4.2516 | 3.9348 | 3.9964 | 97.76% | -0.5330 |
| x | | 0.0630 | 4.2035 | 3.9033 | 3.9932 | 97.30% | -0.3960 |
| %RSD | | 5.1747 | 1.3910 | 2.0127 | 1.4513 | 0.79 | 77.3690 |

**CCV2** 06/17/2015 16:40:15

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | 93.83% | ↹2545.0000 | ↹49043.0000 | ↹49173.0000 | ↹49192.0000 | ↹48932.0000 | ↹49016.0000 | ↹48102.0000 | 49658.0000 |
| 2 | 16:41:35 | 92.99% | ↹2586.1000 | ↹49294.0000 | ↹49596.0000 | ↹49106.0000 | ↹49091.0000 | ↹48834.0000 | ↹48718.0000 | ↹49518.0000 |
| 3 | 16:42:16 | 92.44% | ↹2613.5000 | ↹49912.0000 | ↹49979.0000 | ↹49404.0000 | ↹49811.0000 | ↹49563.0000 | ↹49622.0000 | 50473.0000 |
| 4 | 16:42:56 | 94.47% | ↹2552.3000 | ↹49664.0000 | ↹49543.0000 | ↹48875.0000 | ↹48890.0000 | ↹48339.0000 | ↹48604.0000 | 49410.0000 |
| 5 | 16:43:36 | 94.36% | ↹2541.7000 | ↹48666.0000 | ↹49013.0000 | ↹48183.0000 | ↹47724.0000 | ↹47954.0000 | ↹47255.0000 | 48437.0000 |
| x | | 93.62% | ↹2567.7000 | ↹49316.0000 | ↹49461.0000 | ↹48952.0000 | ↹48890.0000 | ↹48741.0000 | ↹48460.0000 | ↹49499.0000 |
| %RSD | | 0.94 | ↹1.2103 | ↹1.0003 | ↹0.7674 | ↹0.9594 | ↹1.5337 | ↹1.2729 | ↹1.7926 | ↹1.4677 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | 92.29% | 0.0310 | ↹2611.1000 | ↹2512.5000 | ↹49151.0000 | ↹2439.7000 | ↹48235.0000 | 47231.0000 | ↹2461.4000 |
| 2 | 16:41:35 | 93.75% | 0.0183 | ↹2581.1000 | ↹2469.2000 | ↹49095.0000 | ↹2450.6000 | ↹48000.0000 | 48084.0000 | ↹2502.8000 |
| 3 | 16:42:16 | 93.98% | 0.0182 | ↹2612.2000 | ↹2513.8000 | ↹49230.0000 | ↹2473.4000 | ↹48749.0000 | 48140.0000 | ↹2498.4000 |
| 4 | 16:42:56 | 95.36% | 0.0160 | ↹2542.9000 | ↹2462.3000 | ↹48838.0000 | ↹2431.8000 | ↹47920.0000 | 47300.0000 | ↹2450.3000 |
| 5 | 16:43:36 | 96.12% | 0.0107 | ↹2539.5000 | ↹2448.7000 | ↹47961.0000 | ↹2369.2000 | ↹47378.0000 | 46308.0000 | ↹2422.0000 |
| x | | 94.30% | 0.0188 | ↹2577.3000 | ↹2481.3000 | ↹48855.0000 | ↹2433.0000 | ↹48056.0000 | 47413.0000 | ↹2467.0000 |
| %RSD | | 1.58 | 39.5920 | ↹1.3693 | ↹1.2089 | ↹1.0664 | ↹1.5994 | ↹1.0372 | 1.5807 | ↹1.3744 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | 2489.3000 | ↹2399.6000 | ↹2415.6000 | 2353.4000 | 2485.6000 | 261.7900 | 255.6200 | 0.4022 | 87.63% |
| 2 | 16:41:35 | ↹2464.9000 | ↹2398.2000 | ↹2421.8000 | 2361.5000 | 2478.5000 | 261.7100 | 260.0900 | 0.9563 | 87.35% |
| 3 | 16:42:16 | 2512.2000 | ↹2433.8000 | ↹2436.6000 | 2377.1000 | 2521.0000 | 266.2400 | 261.7600 | -0.6858 | 88.04% |
| 4 | 16:42:56 | 2470.5000 | ↹2393.1000 | ↹2419.0000 | 2354.9000 | 2475.5000 | 261.5000 | 259.1000 | 0.0846 | 89.09% |
| 5 | 16:43:36 | 2448.0000 | ↹2376.0000 | ↹2398.2000 | 2314.9000 | 2456.9000 | 263.2900 | 255.7900 | 1.2696 | 88.14% |
| x | | ↹2477.0000 | ↹2400.1000 | ↹2418.3000 | 2352.3000 | 2483.5000 | 262.9000 | 258.4700 | 0.4054 | 88.05% |
| %RSD | | ↹0.9929 | ↹0.8765 | ↹0.5697 | 0.9754 | 0.9469 | 0.7589 | 1.0446 | 188.8300 | 0.75 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 85.26% | 263.7400 | -16.1460 | 261.2700 |
| 2 | 16:41:35 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 84.99% | 267.6200 | -28.4180 | 267.6800 |
| 3 | 16:42:16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 85.94% | 272.7700 | -24.9550 | 271.5700 |
| 4 | 16:42:56 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 85.61% | 273.9100 | -11.5760 | 273.2000 |
| 5 | 16:43:36 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 86.05% | 263.9000 | -22.4900 | 262.5300 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 85.57% | 268.3900 | -20.7170 | 267.2500 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.52 | 1.7865 | 32.8140 | 1.9827 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | 2461.0000 | ↹2492.3000 | 0.0000 | 0.0000 | ↹2548.2000 | 2453.8000 | 2547.9000 | 87.85% | ↹2554.3000 |
| 2 | 16:41:35 | 2472.9000 | ↹2515.3000 | 0.0000 | 0.0000 | ↹2560.1000 | 2455.8000 | 2577.9000 | 88.26% | ↹2592.3000 |
| 3 | 16:42:16 | 2493.6000 | ↹2526.0000 | 0.0000 | 0.0000 | ↹2571.0000 | 2487.3000 | 2600.7000 | 88.01% | ↹2608.0000 |
| 4 | 16:42:56 | 2470.6000 | ↹2509.5000 | 0.0000 | 0.0000 | ↹2569.3000 | 2474.3000 | 2592.9000 | 89.71% | ↹2613.3000 |
| 5 | 16:43:36 | 2445.5000 | ↹2474.9000 | 0.0000 | 0.0000 | ↹2520.8000 | 2435.3000 | 2547.3000 | 88.46% | ↹2528.1000 |
| x | | 2468.7000 | ↹2503.6000 | 0.0000 | 0.0000 | ↹2553.9000 | 2461.3000 | 2573.3000 | 88.46% | ↹2579.2000 |
| %RSD | | 0.7128 | ↹0.8058 | 0.0000 | 0.0000 | ↹0.8056 | 0.8150 | 0.9674 | 0.84 | ↹1.4232 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:40:55 | ↹2580.6000 | ↹2561.3000 | ↹2566.5000 | ↹2573.8000 | 83.45% | -0.5330 |
| 2 | 16:41:35 | ↹2595.8000 | ↹2572.7000 | ↹2568.0000 | ↹2568.3000 | 83.81% | 1.8505 |
| 3 | 16:42:16 | ↹2614.9000 | ↹2601.1000 | ↹2627.3000 | ↹2614.7000 | 84.05% | 0.2592 |
| 4 | 16:42:56 | ↹2604.2000 | ↹2567.9000 | ↹2570.7000 | ↹2578.9000 | 84.26% | -0.5330 |
| 5 | 16:43:36 | ↹2536.3000 | ↹2489.2000 | ↹2504.2000 | ↹2506.6000 | 84.94% | 0.2509 |
| x | | ↹2586.4000 | ↹2558.4000 | ↹2567.3000 | ↹2568.5000 | 84.10% | 0.2589 |
| %RSD | | ↹1.1850 | ↹1.6252 | ↹1.6971 | ↹1.5203 | 0.66 | 375.8600 |

**CCB2** 06/17/2015 16:44:38

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 103.17% | 0.4043 | 13.5630 | 6.6246 | 5.9365 | 6.0614 | 5.6766 | 16.5920 | 3.2877 |
| 2 | 16:45:59 | 104.53% | 0.2687 | 10.4070 | 5.1988 | 5.0480 | 4.9333 | 4.2817 | 12.6750 | 2.1629 |
| 3 | 16:46:39 | 105.34% | 0.2234 | 8.3346 | 4.1347 | 3.6458 | 3.8573 | 3.0339 | 9.4778 | -1.4424 |
| 4 | 16:47:20 | 106.65% | 0.1915 | 6.2754 | 3.2015 | 3.3411 | 3.2974 | 2.3205 | 4.7799 | -0.7582 |
| 5 | 16:48:00 | 107.52% | 0.1337 | 4.9586 | 2.4213 | 2.4785 | 2.8249 | 1.5676 | 4.8228 | -0.1145 |
| x | | 105.44% | 0.2443 | 8.7077 | 4.3162 | 4.0900 | 4.1949 | 3.3760 | 9.6695 | 0.6271 |
| %RSD | | 1.63 | 41.7610 | 39.1860 | 38.3750 | 33.8840 | 31.1400 | 48.2510 | 52.8310 | 320.8000 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 99.41% | -0.0015 | 0.3400 | 0.2939 | 4.6710 | 0.3352 | -3.3171 | 9.1714 | 0.2869 |
| 2 | 16:45:59 | 100.62% | 0.0031 | 0.2549 | 0.2320 | 3.0493 | 0.2516 | -3.7962 | 10.8210 | 0.2310 |
| 3 | 16:46:39 | 103.28% | 0.0011 | 0.2448 | 0.1046 | 1.3994 | 0.1768 | -5.1191 | 8.0857 | 0.1720 |
| 4 | 16:47:20 | 103.32% | 0.0027 | 0.1905 | 0.0983 | 1.9610 | 0.1419 | -6.1797 | 5.0072 | 0.1351 |
| 5 | 16:48:00 | 104.26% | -0.0068 | 0.1081 | 0.0449 | -1.9180 | 0.1179 | -6.1225 | 3.3887 | 0.0886 |
| x | | 102.18% | -0.0003 | 0.2277 | 0.1547 | 1.8325 | 0.2047 | -4.9069 | 7.2948 | 0.1827 |
| %RSD | | 2.01 | 1521.5000 | 37.6080 | 67.0960 | 133.1300 | 43.3540 | 26.7730 | 41.7330 | 42.7560 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 0.2611 | 0.8222 | 0.5132 | 0.4092 | 0.7555 | 3.2099 | 1.1307 | -2.6403 | 93.74% |
| 2 | 16:45:59 | 0.2020 | 0.6688 | 0.4877 | 0.3597 | 0.2654 | 2.2405 | -0.0005 | -1.0542 | 95.71% |
| 3 | 16:46:39 | 0.1488 | 0.4894 | 0.3196 | 0.3043 | 0.2675 | 2.5781 | -0.0524 | 0.8122 | 96.96% |
| 4 | 16:47:20 | 0.0922 | 0.4492 | 0.1713 | 0.1626 | 0.3181 | 2.7613 | 0.4207 | 3.1162 | 98.04% |
| 5 | 16:48:00 | 0.0732 | 0.4442 | 0.1665 | 0.1772 | 0.1233 | 2.0212 | -0.3909 | -1.0835 | 97.50% |
| x | | 0.1555 | 0.5748 | 0.3317 | 0.2826 | 0.3460 | 2.5622 | 0.2215 | -0.1699 | 96.39% |
| %RSD | | 49.9880 | 28.8770 | 50.0950 | 38.7450 | 69.4240 | 18.0500 | 263.7500 | 1298.9000 | 1.78 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.27% | 0.1610 | -0.9515 | 0.1393 |
| 2 | 16:45:59 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.98% | 0.1024 | -0.6004 | 0.0992 |
| 3 | 16:46:39 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.04% | 0.0790 | 0.3757 | 0.0770 |
| 4 | 16:47:20 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.68% | 0.0744 | -0.3035 | 0.0702 |
| 5 | 16:48:00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 98.11% | 0.0312 | 0.2230 | 0.0360 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.41% | 0.0896 | -0.2513 | 0.0843 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.48 | 52.9980 | 220.9000 | 45.2860 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 0.3320 | 0.3355 | 0.0000 | 0.0000 | 1.7230 | 0.3377 | 0.3027 | 93.82% | 0.6849 |
| 2 | 16:45:59 | 0.2977 | 0.2044 | 0.0000 | 0.0000 | 1.1947 | 0.2108 | 0.2024 | 95.71% | 0.4363 |
| 3 | 16:46:39 | 0.1683 | 0.2317 | 0.0000 | 0.0000 | 0.9610 | 0.2245 | 0.2097 | 96.46% | 0.3268 |
| 4 | 16:47:20 | 0.1183 | 0.1292 | 0.0000 | 0.0000 | 0.6903 | 0.1521 | 0.1526 | 97.73% | 0.2318 |
| 5 | 16:48:00 | 0.0739 | 0.0794 | 0.0000 | 0.0000 | 0.6452 | 0.0876 | 0.0909 | 98.84% | 0.1691 |
| x | | 0.1980 | 0.1961 | 0.0000 | 0.0000 | 1.0428 | 0.2025 | 0.1917 | 96.51% | 0.3698 |
| %RSD | | 56.7680 | 50.2870 | 0.0000 | 0.0000 | 42.2030 | 45.9070 | 40.7790 | 1.99 | 54.9000 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:45:19 | 0.6859 | 0.3990 | 0.3590 | 0.3662 | 94.33% | 0.1728 |
| 2 | 16:45:59 | 0.4721 | 0.2948 | 0.2494 | 0.2834 | 96.61% | 0.1562 |
| 3 | 16:46:39 | 0.2960 | 0.2288 | 0.2179 | 0.2080 | 98.40% | 0.1436 |
| 4 | 16:47:20 | 0.2262 | 0.1407 | 0.1527 | 0.1549 | 99.72% | 0.1347 |
| 5 | 16:48:00 | 0.1871 | 0.1298 | 0.1716 | 0.1450 | 99.52% | 0.1360 |
| x | | 0.3735 | 0.2386 | 0.2301 | 0.2315 | 97.72% | 0.1487 |
| %RSD | | 55.1620 | 47.0430 | 35.4030 | 40.2520 | 2.31 | 10.7410 |

**MF9M28-5x** 06/17/2015 16:49:02

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 103.16% | 1.1155 | 124.7700 | T3141.9000 | 2987.2000 | 3069.5000 | T26357.0000 | T3391.7000 | 3565.5000 |
| 2 | 16:50:22 | 101.91% | 1.1854 | 130.4500 | T3180.0000 | 3025.5000 | 3117.7000 | T26479.0000 | T3445.6000 | 3607.4000 |
| 3 | 16:51:03 | 101.94% | 1.1048 | 128.1100 | T3204.0000 | 3022.2000 | 3073.5000 | T26359.0000 | T3402.2000 | 3504.2000 |
| 4 | 16:51:43 | 102.82% | 1.1320 | 126.2600 | T3175.2000 | 2980.6000 | 3047.8000 | T25996.0000 | T3414.6000 | 3488.9000 |
| 5 | 16:52:23 | 102.57% | 1.1174 | 123.7100 | T3134.7000 | 2949.9000 | 3004.2000 | T25760.0000 | T3335.7000 | 3488.7000 |
| x | | 102.48% | 1.1310 | 126.6600 | T3167.2000 | 2993.1000 | 3062.6000 | T26190.0000 | T3398.0000 | 3530.9000 |
| %RSD | | 0.54 | 2.8231 | 2.1208 | T0.9039 | 1.0514 | 1.3488 | T1.1495 | T1.1850 | 1.5053 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 104.57% | 16.3820 | 44.9780 | 29.6340 | T22502.0000 | 271.2900 | T22731.0000 | 21472.0000 | 8.5318 |
| 2 | 16:50:22 | 105.21% | 16.7460 | 45.3610 | 30.2040 | 22286.0000 | 273.1400 | T22634.0000 | 21909.0000 | 8.5624 |
| 3 | 16:51:03 | 106.61% | 16.0640 | 44.4990 | 29.7110 | T22009.0000 | 268.7100 | T22441.0000 | 21548.0000 | 8.4662 |
| 4 | 16:51:43 | 106.82% | 15.7960 | 44.4470 | 29.2680 | 21645.0000 | 265.4500 | T22132.0000 | 21126.0000 | 8.2444 |
| 5 | 16:52:23 | 106.38% | 16.1650 | 43.8330 | 29.0020 | 21590.0000 | 262.2600 | T21930.0000 | 21012.0000 | 8.2767 |
| x | | 105.92% | 16.2310 | 44.6230 | 29.5640 | T22006.0000 | 268.1700 | T22374.0000 | 21414.0000 | 8.4163 |
| %RSD | | 0.92 | 2.1997 | 1.2978 | 1.5502 | T1.8000 | 1.6362 | T1.5078 | 1.6686 | 1.7443 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 17.4530 | 13.4470 | 13.9700 | 45.0690 | 3.8107 | 1.2377 | 0.7455 | -1.9240 | 102.61% |
| 2 | 16:50:22 | 17.4850 | 13.2760 | 13.7080 | 45.4540 | 4.0591 | 2.0100 | 0.9334 | -2.0016 | 103.37% |
| 3 | 16:51:03 | 17.3040 | 13.5410 | 13.8040 | 45.0650 | 3.8252 | 1.2132 | 0.2088 | 0.5993 | 102.41% |
| 4 | 16:51:43 | 16.9140 | 13.5850 | 13.6500 | 44.0780 | 3.7239 | 1.0331 | 0.4925 | -0.0087 | 104.32% |
| 5 | 16:52:23 | 16.9330 | 13.0190 | 13.3350 | 43.4820 | 3.8938 | 0.8867 | 0.6438 | 0.8098 | 102.94% |
| x | | 17.2180 | 13.3740 | 13.6930 | 44.6300 | 3.8625 | 1.2761 | 0.6048 | -0.5051 | 103.13% |
| %RSD | | 1.6111 | 1.7247 | 1.7097 | 1.8349 | 3.2467 | 34.0380 | 45.1850 | 270.1800 | 0.74 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.06% | 0.0832 | -1.5291 | 0.0487 |
| 2 | 16:50:22 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.31% | 0.0752 | -2.0435 | 0.0560 |
| 3 | 16:51:03 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.83% | 0.0882 | -1.3552 | 0.0476 |
| 4 | 16:51:43 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.80% | 0.0739 | -1.3691 | 0.0416 |
| 5 | 16:52:23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 97.15% | 0.0557 | -1.4751 | 0.0449 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.63% | 0.0752 | -1.5544 | 0.0478 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.07 | 16.4830 | 18.2010 | 11.1870 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 0.0680 | 0.1707 | 0.0000 | 0.0000 | 0.4033 | 120.4000 | 125.2600 | 96.31% | 0.3188 |
| 2 | 16:50:22 | 0.0223 | 0.1290 | 0.0000 | 0.0000 | 0.3802 | 122.6100 | 124.2400 | 97.27% | 0.3274 |
| 3 | 16:51:03 | -0.0114 | 0.0971 | 0.0000 | 0.0000 | 0.3567 | 122.5500 | 126.1300 | 97.86% | 0.3081 |
| 4 | 16:51:43 | -0.0463 | 0.1470 | 0.0000 | 0.0000 | 0.2858 | 121.9100 | 123.3100 | 97.95% | 0.2840 |
| 5 | 16:52:23 | -0.0003 | 0.1272 | 0.0000 | 0.0000 | 0.2827 | 117.8900 | 120.7900 | 97.49% | 0.2959 |
| x | | 0.0065 | 0.1342 | 0.0000 | 0.0000 | 0.3417 | 121.0700 | 123.9500 | 97.38% | 0.3068 |
| %RSD | | 656.4500 | 20.2210 | 0.0000 | 0.0000 | 16.0950 | 1.6424 | 1.6604 | 0.68 | 5.6652 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:49:42 | 0.3563 | 32.9460 | 30.0420 | 31.1620 | 95.05% | -0.5330 |
| 2 | 16:50:22 | 0.3309 | 32.4900 | 29.9240 | 30.9080 | 95.87% | 0.1615 |
| 3 | 16:51:03 | 0.2997 | 32.4920 | 30.1690 | 30.7900 | 95.72% | -0.5330 |
| 4 | 16:51:43 | 0.2803 | 32.0290 | 29.6730 | 30.5630 | 95.87% | -0.5330 |
| 5 | 16:52:23 | 0.2576 | 31.3560 | 28.9640 | 29.5270 | 95.99% | -0.5330 |
| x | | 0.3050 | 32.2630 | 29.7540 | 30.5900 | 95.70% | -0.3941 |
| %RSD | | 12.9020 | 1.8647 | 1.6067 | 2.0663 | 0.39 | 78.8120 |

**MF9M29-5x** 06/17/2015 16:53:25

User-Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | 100.29% | 2.0434 | ↹678.6500 | ↹6234.3000 | 5968.0000 | 6048.4000 | ↹53787.0000 | ↹5673.5000 | 10426.0000 |
| 2 | 16:54:45 | 101.49% | 2.0744 | ↹672.9400 | ↹6272.3000 | 5930.7000 | 6152.7000 | ↹54559.0000 | ↹5849.9000 | 10750.0000 |
| 3 | 16:55:26 | 101.51% | 1.9755 | ↹684.8600 | ↹6356.1000 | 6051.5000 | 6134.1000 | ↹54469.0000 | ↹5818.2000 | 10812.0000 |
| 4 | 16:56:06 | 100.74% | 2.0803 | ↹674.9000 | ↹6327.9000 | 6064.6000 | 6167.2000 | ↹54663.0000 | ↹5859.1000 | 10888.0000 |
| 5 | 16:56:46 | 100.87% | 2.0065 | ↹668.2400 | ↹6265.2000 | 5949.4000 | 6038.6000 | ↹53369.0000 | ↹5754.2000 | 10606.0000 |
| x | | 100.98% | 2.0360 | ↹675.9200 | ↹6291.2000 | 5992.8000 | 6108.2000 | ↹54169.0000 | ↹5791.0000 | 10697.0000 |
| %RSD | | 0.52 | 2.2005 | ↹0.9244 | ↹0.7881 | 1.0205 | 0.9877 | ↹1.0411 | ↹1.3374 | 1.7134 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | 107.15% | 16.3090 | 75.3410 | 55.3630 | ↹40250.0000 | ↹658.9300 | ↹40413.0000 | 39027.0000 | 12.4250 |
| 2 | 16:54:45 | 106.72% | 16.2090 | 75.2750 | 55.7770 | ↹41161.0000 | ↹671.7200 | ↹41088.0000 | 39936.0000 | 12.4810 |
| 3 | 16:55:26 | 107.70% | 16.3770 | 75.6390 | 56.5580 | ↹41211.0000 | ↹674.4600 | ↹41211.0000 | 40106.0000 | 12.6010 |
| 4 | 16:56:06 | 107.02% | 16.2710 | 76.5340 | 55.5320 | ↹40506.0000 | ↹670.4100 | ↹41067.0000 | 39747.0000 | 12.3730 |
| 5 | 16:56:46 | 106.88% | 16.2350 | 74.2740 | 55.4110 | ↹40334.0000 | ↹658.8300 | ↹40322.0000 | 38808.0000 | 12.3100 |
| x | | 107.09% | 16.2800 | 75.4130 | 55.7280 | ↹40692.0000 | ↹666.8700 | ↹40820.0000 | 39525.0000 | 12.4380 |
| %RSD | | 0.35 | 0.4033 | 1.0752 | 0.8805 | ↹1.1310 | ↹1.1157 | ↹1.0246 | 1.4522 | 0.8911 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | 31.7210 | 26.5030 | 26.6960 | 56.6870 | 4.8241 | 1.3146 | -0.0513 | 0.7457 | 99.89% |
| 2 | 16:54:45 | 32.8510 | 26.9400 | 27.2750 | 57.6100 | 4.9230 | 0.9923 | 0.2766 | 0.8056 | 101.18% |
| 3 | 16:55:26 | 32.6420 | 26.8140 | 27.3570 | 58.1400 | 4.9930 | 1.0701 | 0.5889 | 0.0212 | 100.82% |
| 4 | 16:56:06 | 32.5420 | 27.5020 | 27.2490 | 57.9360 | 5.0444 | 0.8859 | 0.3938 | -1.0853 | 100.51% |
| 5 | 16:56:46 | 31.7030 | 25.9840 | 26.1950 | 56.7400 | 5.0462 | 0.6073 | 1.1987 | -2.3977 | 102.34% |
| x | | 32.2920 | 26.7480 | 26.9540 | 57.4230 | 4.9661 | 0.9741 | 0.4813 | -0.3821 | 100.95% |
| %RSD | | 1.6748 | 2.0930 | 1.8505 | 1.1744 | 1.8913 | 26.5640 | 96.3070 | 356.0100 | 0.90 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.18% | 0.0924 | -1.7949 | 0.0513 |
| 2 | 16:54:45 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.03% | 0.0933 | -3.0664 | 0.0500 |
| 3 | 16:55:26 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.84% | 0.1066 | -2.3900 | 0.0554 |
| 4 | 16:56:06 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.99% | 0.1034 | -2.4549 | 0.0615 |
| 5 | 16:56:46 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.04% | 0.1097 | -1.8976 | 0.0444 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.61% | 0.1011 | -2.3208 | 0.0525 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.86 | 7.7706 | 21.9110 | 12.1600 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | -0.1233 | 0.1520 | 0.0000 | 0.0000 | 0.1793 | 222.9500 | 225.7500 | 92.77% | 0.4375 |
| 2 | 16:54:45 | -0.0516 | 0.1002 | 0.0000 | 0.0000 | 0.1742 | 224.2000 | 229.0800 | 94.23% | 0.4103 |
| 3 | 16:55:26 | -0.1135 | 0.1035 | 0.0000 | 0.0000 | 0.1432 | 225.2400 | 233.0300 | 92.42% | 0.4278 |
| 4 | 16:56:06 | -0.0853 | 0.0877 | 0.0000 | 0.0000 | 0.1531 | 224.5700 | 231.6900 | 92.72% | 0.4444 |
| 5 | 16:56:46 | -0.1492 | 0.0916 | 0.0000 | 0.0000 | 0.1643 | 218.2200 | 224.8000 | 93.68% | 0.4156 |
| x | | -0.1046 | 0.1070 | 0.0000 | 0.0000 | 0.1628 | 223.0400 | 228.8700 | 93.16% | 0.4271 |
| %RSD | | 35.7870 | 24.2530 | 0.0000 | 0.0000 | 9.1283 | 1.2643 | 1.5686 | 0.82 | 3.3537 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:54:05 | 0.4226 | 36.9340 | 34.9490 | 35.7470 | 90.71% | 0.2010 |
| 2 | 16:54:45 | 0.4302 | 38.3640 | 35.6200 | 36.4920 | 91.51% | 0.9223 |
| 3 | 16:55:26 | 0.4147 | 38.4110 | 35.3500 | 36.4810 | 91.60% | -0.5330 |
| 4 | 16:56:06 | 0.4218 | 38.2310 | 35.2850 | 36.1060 | 91.48% | -0.5330 |
| 5 | 16:56:46 | 0.4338 | 37.1900 | 33.8970 | 35.4430 | 92.19% | -0.5330 |
| x | | 0.4246 | 37.8260 | 35.0200 | 36.0540 | 91.50% | -0.0952 |
| %RSD | | 1.7795 | 1.8676 | 1.9183 | 1.2743 | 0.58 | 684.6300 |

**MF9M30-5x** 06/17/2015 16:57:48

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | 100.19% | 2.5589 | 277.6700 | ↹6433.3000 | 6122.6000 | 6282.2000 | ↹60891.0000 | ↹6351.7000 | 5330.2000 |
| 2 | 16:59:09 | 102.51% | 2.4639 | 279.4500 | ↹6364.2000 | 6007.8000 | 6145.5000 | ↹60400.0000 | ↹6400.2000 | 5300.1000 |
| 3 | 16:59:49 | 100.45% | 2.5149 | 283.5100 | ↹6458.3000 | 6269.0000 | 6255.0000 | ↹60720.0000 | ↹6464.6000 | 5383.9000 |
| 4 | 17:00:30 | 101.49% | 2.5969 | 281.1100 | ↹6520.3000 | 6089.3000 | 6200.5000 | ↹60606.0000 | ↹6479.3000 | 5416.6000 |
| 5 | 17:01:10 | 101.38% | 2.4754 | 273.9100 | ↹6317.2000 | 6049.2000 | 6192.6000 | ↹60046.0000 | ↹6389.5000 | 5375.8000 |
| x | | 101.20% | 2.5220 | 279.1300 | ↹6418.7000 | 6107.6000 | 6215.2000 | ↹60532.0000 | ↹6417.1000 | 5361.3000 |
| %RSD | | 0.91 | 2.2223 | 1.2994 | ↹1.2409 | 1.6368 | 0.8687 | ↹0.5376 | ↹0.8336 | 0.8594 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | 106.44% | 23.1530 | 90.9760 | 65.2590 | ↹49130.0000 | ↹892.5100 | ↹48810.0000 | ↹48153.0000 | 18.7400 |
| 2 | 16:59:09 | 107.80% | 23.4560 | 89.9680 | 64.9070 | ↹48404.0000 | ↹883.3000 | ↹48149.0000 | ↹47694.0000 | 18.2430 |
| 3 | 16:59:49 | 107.47% | 23.9650 | 90.7400 | 65.2070 | ↹48677.0000 | ↹893.6700 | ↹49498.0000 | 47721.0000 | 18.7660 |
| 4 | 17:00:30 | 107.68% | 23.2240 | 90.0390 | 64.8900 | ↹48499.0000 | ↹882.3500 | ↹48280.0000 | 46947.0000 | 18.6130 |
| 5 | 17:01:10 | 108.24% | 23.2840 | 89.7060 | 64.0560 | ↹47958.0000 | ↹883.1000 | ↹48255.0000 | 46779.0000 | 18.3530 |
| x | | 107.53% | 23.4160 | 90.2860 | 64.8640 | ↹48534.0000 | ↹886.9900 | ↹48598.0000 | ↹47459.0000 | 18.5430 |
| %RSD | | 0.62 | 1.3949 | 0.6019 | 0.7433 | ↹0.8773 | ↹0.6311 | ↹1.1622 | ↹1.2152 | 1.2631 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | 37.7020 | 20.1310 | 21.1900 | 54.4530 | 8.1592 | 0.1255 | 0.1424 | 1.3438 | 103.47% |
| 2 | 16:59:09 | 37.3240 | 20.3830 | 20.9360 | 53.9380 | 8.3517 | 0.4778 | 0.4053 | -0.4917 | 106.36% |
| 3 | 16:59:49 | 37.9850 | 20.7140 | 21.1640 | 55.1270 | 7.9884 | 0.2722 | 0.0454 | 0.7392 | 104.58% |
| 4 | 17:00:30 | 37.6580 | 20.3910 | 20.7930 | 53.9160 | 8.3447 | 0.9691 | 1.1808 | -0.4796 | 105.61% |
| 5 | 17:01:10 | 37.1850 | 20.0840 | 20.5450 | 53.1720 | 7.8421 | 0.7112 | -0.1277 | 0.7674 | 106.56% |
| x | | 37.5710 | 20.3410 | 20.9250 | 54.1210 | 8.1372 | 0.5111 | 0.3292 | 0.3758 | 105.32% |
| %RSD | | 0.8478 | 1.2381 | 1.2857 | 1.3381 | 2.7395 | 66.1050 | 156.0000 | 218.8800 | 1.23 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.30% | 0.0898 | -2.8620 | 0.0345 |
| 2 | 16:59:09 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.02% | 0.0924 | -1.8880 | 0.0428 |
| 3 | 16:59:49 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.67% | 0.1003 | -3.1069 | 0.0359 |
| 4 | 17:00:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.51% | 0.1114 | -2.6610 | 0.0437 |
| 5 | 17:01:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.05% | 0.0987 | -3.5077 | 0.0428 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.51% | 0.0985 | -2.8051 | 0.0399 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.76 | 8.5340 | 21.4620 | 10.9720 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | -0.1377 | 0.0591 | 0.0000 | 0.0000 | 0.1211 | 380.8700 | 396.3900 | 91.67% | 0.5077 |
| 2 | 16:59:09 | -0.1754 | 0.0730 | 0.0000 | 0.0000 | 0.1135 | 377.0100 | 390.8700 | 93.71% | 0.4771 |
| 3 | 16:59:49 | -0.1570 | 0.0441 | 0.0000 | 0.0000 | 0.1193 | 383.8300 | 396.5600 | 92.77% | 0.5128 |
| 4 | 17:00:30 | -0.1206 | 0.0410 | 0.0000 | 0.0000 | 0.1124 | 382.4100 | 394.2200 | 93.49% | 0.4648 |
| 5 | 17:01:10 | -0.1425 | 0.0543 | 0.0000 | 0.0000 | 0.0996 | 372.8300 | 385.7500 | 94.56% | 0.4416 |
| x | | -0.1466 | 0.0543 | 0.0000 | 0.0000 | 0.1132 | 379.3900 | 392.7600 | 93.24% | 0.4808 |
| %RSD | | 14.0980 | 23.5320 | 0.0000 | 0.0000 | 7.4717 | 1.1769 | 1.1556 | 1.16 | 6.1971 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 16:58:28 | 0.4965 | 14.7640 | 13.2180 | 13.8350 | 90.30% | -0.5330 |
| 2 | 16:59:09 | 0.4749 | 14.5160 | 13.3800 | 13.9140 | 91.45% | 0.1951 |
| 3 | 16:59:49 | 0.4887 | 14.9070 | 13.5670 | 14.2350 | 90.84% | 0.2000 |
| 4 | 17:00:30 | 0.4700 | 14.9730 | 13.6470 | 14.0360 | 91.40% | -0.5330 |
| 5 | 17:01:10 | 0.4659 | 14.4470 | 13.2220 | 13.8230 | 92.99% | 0.1831 |
| x | | 0.4792 | 14.7210 | 13.4070 | 13.9680 | 91.40% | -0.0976 |
| %RSD | | 2.7025 | 1.5814 | 1.4604 | 1.2278 | 1.10 | 407.3200 |

**MF9M31-5x** 06/17/2015 17:02:15

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | 101.41% | 0.8975 | 94.4120 | ↹3162.4000 | 3062.3000 | 3137.3000 | ↹32992.0000 | ↹4492.2000 | 10350.0000 |
| 2 | 17:03:37 | 101.03% | 0.9018 | 95.6290 | ↹3270.0000 | 3062.9000 | 3169.7000 | ↹33252.0000 | ↹4585.8000 | 10587.0000 |
| 3 | 17:04:18 | 100.93% | 0.8678 | 96.2320 | ↹3299.8000 | 3129.5000 | 3207.8000 | ↹33172.0000 | ↹4613.1000 | 10640.0000 |
| 4 | 17:04:58 | 102.45% | 0.7982 | 92.9650 | ↹3198.8000 | 3096.6000 | 3121.7000 | ↹32748.0000 | ↹4598.9000 | 10504.0000 |
| 5 | 17:05:38 | 101.74% | 0.8564 | 94.1370 | ↹3245.0000 | 3071.7000 | 3156.5000 | ↹33100.0000 | ↹4574.1000 | 10692.0000 |
| x | | 101.51% | 0.8643 | 94.6750 | ↹3235.2000 | 3084.6000 | 3158.6000 | ↹33053.0000 | ↹4572.8000 | 10555.0000 |
| %RSD | | 0.61 | 4.8267 | 1.3585 | ↹1.7007 | 0.9309 | 1.0460 | ↹0.5911 | ↹1.0356 | 1.2674 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | 103.34% | 28.9250 | 54.0280 | 35.4960 | ↹25401.0000 | 182.8400 | ↹26009.0000 | 24843.0000 | 6.4867 |
| 2 | 17:03:37 | 103.85% | 29.0280 | 55.2760 | 35.8420 | ↹26077.0000 | 184.4500 | ↹26213.0000 | 25083.0000 | 6.4947 |
| 3 | 17:04:18 | 104.39% | 29.5370 | 55.6030 | 36.1590 | ↹26207.0000 | 187.4000 | ↹26573.0000 | 25324.0000 | 6.7001 |
| 4 | 17:04:58 | 104.51% | 29.3760 | 54.4450 | 35.5190 | ↹25792.0000 | 185.5500 | ↹26112.0000 | 24982.0000 | 6.5668 |
| 5 | 17:05:38 | 103.28% | 29.2880 | 55.0150 | 35.5690 | ↹26001.0000 | 184.2400 | ↹26189.0000 | 24952.0000 | 6.5475 |
| x | | 103.87% | 29.2310 | 54.8730 | 35.7170 | ↹25896.0000 | 184.9000 | ↹26219.0000 | 25037.0000 | 6.5592 |
| %RSD | | 0.55 | 0.8601 | 1.1576 | 0.7930 | ↹1.2167 | 0.9195 | ↹0.8133 | 0.7267 | 1.3083 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | 18.7010 | 16.1170 | 16.1270 | 38.5910 | 2.9640 | 0.7618 | 0.8719 | 0.1779 | 98.80% |
| 2 | 17:03:37 | 19.0040 | 16.0310 | 16.3940 | 38.9930 | 3.1169 | 0.3953 | 1.1269 | -2.5072 | 100.18% |
| 3 | 17:04:18 | 18.6950 | 16.2710 | 16.3630 | 40.7210 | 3.0536 | 1.2150 | 0.3143 | 1.0118 | 99.76% |
| 4 | 17:04:58 | 18.7390 | 16.2990 | 16.3900 | 39.1480 | 2.9558 | 0.7845 | 0.7757 | 0.1860 | 100.39% |
| 5 | 17:05:38 | 18.6490 | 16.0870 | 16.2680 | 40.0360 | 2.9262 | 0.9619 | 0.7334 | 0.1044 | 99.47% |
| x | | 18.7580 | 16.1610 | 16.3080 | 39.4980 | 3.0033 | 0.8237 | 0.7644 | -0.2054 | 99.72% |
| %RSD | | 0.7538 | 0.7286 | 0.6960 | 2.1873 | 2.6413 | 36.4770 | 38.5060 | 651.9400 | 0.63 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.34% | 0.0706 | -2.1779 | 0.0417 |
| 2 | 17:03:37 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.07% | 0.0783 | -1.0077 | 0.0432 |
| 3 | 17:04:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.80% | 0.0836 | -1.3566 | 0.0449 |
| 4 | 17:04:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.23% | 0.0911 | -1.4526 | 0.0458 |
| 5 | 17:05:38 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.38% | 0.0806 | -1.4118 | 0.0415 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.17% | 0.0808 | -1.4813 | 0.0434 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.98 | 9.2727 | 28.8560 | 4.3967 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | -0.0470 | 0.0934 | 0.0000 | 0.0000 | 0.1315 | 136.2400 | 139.1100 | 93.07% | 0.2973 |
| 2 | 17:03:37 | -0.1441 | 0.1138 | 0.0000 | 0.0000 | 0.1095 | 135.9000 | 138.8100 | 95.18% | 0.2768 |
| 3 | 17:04:18 | -0.0488 | 0.1146 | 0.0000 | 0.0000 | 0.0754 | 136.0400 | 141.2900 | 94.85% | 0.2815 |
| 4 | 17:04:58 | -0.1117 | 0.0974 | 0.0000 | 0.0000 | 0.0833 | 137.0400 | 141.5800 | 94.38% | 0.2805 |
| 5 | 17:05:38 | -0.0311 | 0.0831 | 0.0000 | 0.0000 | 0.0750 | 133.8200 | 138.2300 | 95.17% | 0.2653 |
| x | | -0.0765 | 0.1005 | 0.0000 | 0.0000 | 0.0949 | 135.8100 | 139.8100 | 94.53% | 0.2803 |
| %RSD | | 63.7040 | 13.5290 | 0.0000 | 0.0000 | 26.1200 | 0.8797 | 1.0914 | 0.93 | 4.1016 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:02:57 | 0.2848 | 31.8250 | 29.0160 | 30.0820 | 91.83% | -0.5330 |
| 2 | 17:03:37 | 0.2877 | 31.8730 | 29.4460 | 30.3060 | 93.76% | 0.1771 |
| 3 | 17:04:18 | 0.2837 | 31.6960 | 29.4330 | 30.2610 | 94.01% | 0.8836 |
| 4 | 17:04:58 | 0.2621 | 31.7590 | 29.1520 | 29.9870 | 93.79% | 0.1769 |
| 5 | 17:05:38 | 0.2721 | 31.9350 | 29.7490 | 30.1160 | 93.43% | 0.1796 |
| x | | 0.2781 | 31.8180 | 29.3590 | 30.1500 | 93.37% | 0.1768 |
| %RSD | | 3.8529 | 0.2949 | 0.9724 | 0.4361 | 0.94 | 283.2300 |

**MF9M32-5x** 06/17/2015 17:06:41

User.Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 100.89% | 1.5303 | 99.1820 | τ3185.7000 | 2951.4000 | 3018.3000 | τ31589.0000 | τ3864.2000 | 7830.1000 |
| 2 | 17:08:02 | 101.87% | 1.5818 | 98.5860 | τ3125.0000 | 2965.0000 | 3033.5000 | τ31316.0000 | τ3846.5000 | 7695.6000 |
| 3 | 17:08:42 | 101.41% | 1.4966 | 98.7340 | τ3131.6000 | 3009.4000 | 3048.5000 | τ31566.0000 | τ3879.6000 | 7800.5000 |
| 4 | 17:09:23 | 101.12% | 1.4805 | 99.2270 | τ3120.3000 | 2947.2000 | 3013.7000 | τ30935.0000 | τ3791.2000 | 7826.5000 |
| 5 | 17:10:03 | 103.53% | 1.5025 | 96.2530 | τ3036.4000 | 2903.1000 | 2930.3000 | τ30163.0000 | τ3697.9000 | 7627.3000 |
| x | | 101.76% | 1.5183 | 98.3960 | τ3119.8000 | 2955.2000 | 3008.8000 | τ31114.0000 | τ3815.9000 | 7756.0000 |
| %RSD | | 1.03 | 2.6198 | 1.2501 | τ1.7168 | 1.2919 | 1.5284 | τ1.9070 | τ1.9374 | 1.1650 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 102.86% | 32.6060 | 55.5870 | 36.6880 | τ28167.0000 | τ597.5700 | τ28465.0000 | 27185.0000 | 15.4310 |
| 2 | 17:08:02 | 104.11% | 32.2840 | 55.6800 | 36.5080 | τ28277.0000 | τ593.3800 | τ28445.0000 | 27286.0000 | 15.4090 |
| 3 | 17:08:42 | 104.19% | 32.2440 | 55.8260 | 36.5010 | τ28392.0000 | τ594.1100 | τ28336.0000 | 27039.0000 | 15.4670 |
| 4 | 17:09:23 | 104.97% | 32.3560 | 55.0770 | 35.9950 | τ28003.0000 | τ588.8100 | τ28101.0000 | 26772.0000 | 15.2590 |
| 5 | 17:10:03 | 105.25% | 31.3820 | 54.5520 | 35.5230 | τ27769.0000 | τ580.6500 | τ27903.0000 | 26673.0000 | 14.9540 |
| x | | 104.28% | 32.1750 | 55.3440 | 36.2430 | τ28122.0000 | τ590.9000 | τ28250.0000 | 26991.0000 | 15.3040 |
| %RSD | | 0.89 | 1.4452 | 0.9483 | 1.3199 | τ0.8674 | τ1.1048 | τ0.8559 | 0.9737 | 1.3794 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 21.7720 | 20.8770 | 21.3180 | 46.0250 | 3.9019 | 1.1917 | 1.3530 | -1.1411 | 103.75% |
| 2 | 17:08:02 | 22.1550 | 21.1870 | 21.6100 | 45.9960 | 3.9569 | 1.1668 | 0.9137 | 0.1368 | 103.99% |
| 3 | 17:08:42 | 21.7450 | 21.3390 | 21.1360 | 46.6630 | 4.1724 | 1.2607 | 0.8645 | -0.1420 | 104.12% |
| 4 | 17:09:23 | 21.9980 | 21.3250 | 21.3580 | 45.9120 | 3.6995 | 1.3476 | 0.6723 | 1.5912 | 103.83% |
| 5 | 17:10:03 | 21.5850 | 20.6250 | 21.5760 | 45.3130 | 3.9273 | 0.9771 | 1.0285 | -0.4932 | 103.51% |
| x | | 21.8510 | 21.0700 | 21.4000 | 45.9820 | 3.9316 | 1.1888 | 0.9664 | -0.0096 | 103.84% |
| %RSD | | 1.0285 | 1.4755 | 0.9146 | 1.0415 | 4.2822 | 11.5720 | 26.0230 | 10514.0000 | 0.22 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.66% | 0.1072 | -2.3704 | 0.0658 |
| 2 | 17:08:02 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.40% | 0.1080 | -2.1272 | 0.0639 |
| 3 | 17:08:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.07% | 0.1161 | -3.0479 | 0.0696 |
| 4 | 17:09:23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.34% | 0.1100 | -2.1111 | 0.0783 |
| 5 | 17:10:03 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.51% | 0.1041 | -1.4258 | 0.0701 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.80% | 0.1091 | -2.2165 | 0.0695 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.52 | 4.1031 | 26.3000 | 8.0046 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 0.0388 | 0.1710 | 0.0000 | 0.0000 | 0.0713 | 208.3700 | 217.4600 | 93.95% | 0.2995 |
| 2 | 17:08:02 | 0.0668 | 0.1818 | 0.0000 | 0.0000 | 0.0800 | 213.3400 | 216.0200 | 93.92% | 0.3014 |
| 3 | 17:08:42 | 0.0962 | 0.2195 | 0.0000 | 0.0000 | 0.0795 | 212.3400 | 217.8900 | 94.05% | 0.3079 |
| 4 | 17:09:23 | 0.0088 | 0.1975 | 0.0000 | 0.0000 | 0.1017 | 209.3600 | 214.8500 | 94.99% | 0.3023 |
| 5 | 17:10:03 | 0.0234 | 0.1820 | 0.0000 | 0.0000 | 0.1023 | 208.6700 | 214.3600 | 95.33% | 0.3182 |
| x | | 0.0468 | 0.1904 | 0.0000 | 0.0000 | 0.0870 | 210.4200 | 216.1200 | 94.45% | 0.3058 |
| %RSD | | 74.7550 | 9.8938 | 0.0000 | 0.0000 | 16.3060 | 1.0777 | 0.7183 | 0.70 | 2.4770 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:07:21 | 0.3026 | 41.9520 | 39.2950 | 39.9740 | 91.37% | -0.5330 |
| 2 | 17:08:02 | 0.2860 | 42.6650 | 38.7180 | 39.9430 | 92.37% | -0.5330 |
| 3 | 17:08:42 | 0.2854 | 41.3000 | 38.4190 | 39.8710 | 93.14% | -0.5330 |
| 4 | 17:09:23 | 0.2903 | 41.5170 | 38.3170 | 39.4430 | 92.32% | 0.1882 |
| 5 | 17:10:03 | 0.2805 | 41.1160 | 37.8630 | 38.9230 | 94.23% | -0.5330 |
| x | | 0.2890 | 41.7100 | 38.5220 | 39.6310 | 92.69% | -0.3888 |
| %RSD | | 2.9022 | 1.4819 | 1.3755 | 1.1349 | 1.15 | 82.9630 |

MF9M33-5x 06/17/2015 17:11:04

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 101.41% | 0.8145 | 54.0420 | τ1731.3000 | 1679.6000 | 1679.5000 | τ18845.0000 | τ2479.9000 | 2394.4000 |
| 2 | 17:12:24 | 102.77% | 0.8140 | 52.9150 | τ1740.2000 | 1653.7000 | 1675.5000 | τ18574.0000 | τ2482.1000 | 2383.1000 |
| 3 | 17:13:04 | 103.20% | 0.8009 | 53.6700 | τ1749.9000 | 1653.9000 | 1679.3000 | τ18585.0000 | τ2492.8000 | 2356.6000 |
| 4 | 17:13:45 | 103.45% | 0.8087 | 52.9950 | 1680.9000 | 1639.1000 | 1660.6000 | τ18448.0000 | τ2482.8000 | 2305.9000 |
| 5 | 17:14:25 | 103.26% | 0.7369 | 51.8830 | τ1680.6000 | 1608.9000 | 1616.5000 | τ18107.0000 | τ2416.3000 | 2282.3000 |
| x | | 102.82% | 0.7950 | 53.1010 | τ1716.6000 | 1647.0000 | 1662.3000 | τ18512.0000 | τ2470.8000 | 2344.5000 |
| %RSD | | 0.80 | 4.1424 | 1.5581 | τ1.9446 | 1.5675 | 1.6086 | τ1.4503 | τ1.2496 | 2.0772 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 102.16% | 22.8270 | 32.7410 | 22.1190 | 15565.0000 | 198.4100 | τ16218.0000 | 15299.0000 | 6.5073 |
| 2 | 17:12:24 | 103.56% | 22.8140 | 33.3330 | 21.7330 | 15488.0000 | 195.8900 | τ15930.0000 | 15217.0000 | 6.3677 |
| 3 | 17:13:04 | 103.94% | 22.2900 | 33.3550 | 21.8700 | 15604.0000 | 195.8700 | τ16079.0000 | 15138.0000 | 6.2951 |
| 4 | 17:13:45 | 103.68% | 22.0780 | 33.0120 | 21.4780 | 15537.0000 | 194.8400 | τ15958.0000 | 15045.0000 | 6.3155 |
| 5 | 17:14:25 | 104.17% | 22.2230 | 32.3950 | 21.4990 | 15297.0000 | 191.7500 | τ15654.0000 | 14824.0000 | 6.3023 |
| x | | 103.50% | 22.4460 | 32.9670 | 21.7400 | 15498.0000 | 195.3500 | τ15968.0000 | 15105.0000 | 6.3576 |
| %RSD | | 0.76 | 1.5600 | 1.2366 | 1.2332 | 0.7755 | 1.2318 | τ1.3093 | 1.2088 | 1.3905 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 13.9160 | 9.9489 | 10.3270 | 24.0520 | 2.8483 | 0.1827 | 0.8024 | -1.1067 | 99.38% |
| 2 | 17:12:24 | 13.8290 | 9.8551 | 10.0220 | 24.0830 | 2.8543 | 0.3637 | 0.2124 | 0.4644 | 101.08% |
| 3 | 17:13:04 | 13.7630 | 9.8896 | 10.3940 | 24.9040 | 2.7956 | 0.2943 | 0.4601 | -0.6051 | 100.89% |
| 4 | 17:13:45 | 13.8510 | 10.0470 | 10.0020 | 23.5640 | 2.6665 | 0.4431 | 0.0804 | -0.8169 | 101.68% |
| 5 | 17:14:25 | 13.7560 | 9.6289 | 10.1090 | 23.2470 | 2.5173 | 0.1414 | 0.3261 | -1.3609 | 101.66% |
| x | | 13.8230 | 9.8739 | 10.1710 | 23.9700 | 2.7364 | 0.2850 | 0.3763 | -0.6850 | 100.94% |
| %RSD | | 0.4790 | 1.5704 | 1.7600 | 2.6220 | 5.2587 | 43.8010 | 73.4470 | 102.7000 | 0.93 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.43% | 0.0498 | -1.7399 | 0.0364 |
| 2 | 17:12:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.37% | 0.0507 | -1.0767 | 0.0243 |
| 3 | 17:13:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.44% | 0.0550 | -1.8481 | 0.0262 |
| 4 | 17:13:45 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.34% | 0.0614 | -1.4951 | 0.0277 |
| 5 | 17:14:25 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.17% | 0.0360 | -1.0256 | 0.0254 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.35% | 0.0506 | -1.4371 | 0.0280 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.65 | 18.4770 | 26.1120 | 17.3420 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 0.0186 | 0.0772 | 0.0000 | 0.0000 | 0.0789 | 96.9060 | 100.9700 | 95.05% | 0.1698 |
| 2 | 17:12:24 | 0.0054 | 0.0665 | 0.0000 | 0.0000 | 0.0734 | 95.4480 | 100.9100 | 94.75% | 0.1680 |
| 3 | 17:13:04 | 0.0280 | 0.0758 | 0.0000 | 0.0000 | 0.0664 | 97.1160 | 102.3700 | 95.99% | 0.1682 |
| 4 | 17:13:45 | -0.0332 | 0.0737 | 0.0000 | 0.0000 | 0.0396 | 95.9600 | 98.2120 | 97.15% | 0.1795 |
| 5 | 17:14:25 | -0.0513 | 0.0812 | 0.0000 | 0.0000 | 0.0508 | 94.3000 | 97.0270 | 97.47% | 0.1612 |
| x | | -0.0065 | 0.0749 | 0.0000 | 0.0000 | 0.0618 | 95.9460 | 99.8980 | 96.08% | 0.1693 |
| %RSD | | 526.1300 | 7.2588 | 0.0000 | 0.0000 | 26.3900 | 1.1939 | 2.2037 | 1.27 | 3.8933 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:11:44 | 0.1705 | 15.6660 | 14.3440 | 14.9360 | 94.05% | -0.5330 |
| 2 | 17:12:24 | 0.1730 | 15.8030 | 14.4140 | 15.0300 | 94.84% | -0.5330 |
| 3 | 17:13:04 | 0.1670 | 16.2250 | 14.6700 | 15.1420 | 95.60% | -0.5330 |
| 4 | 17:13:45 | 0.1614 | 15.7410 | 14.2190 | 14.9200 | 95.25% | -0.5330 |
| 5 | 17:14:25 | 0.1654 | 15.1600 | 13.9610 | 14.3800 | 96.55% | 0.1566 |
| x | | 0.1675 | 15.7190 | 14.3210 | 14.8810 | 95.26% | -0.3951 |
| %RSD | | 2.6831 | 2.4220 | 1.8157 | 1.9744 | 0.97 | 78.0590 |

**MF9M34-5x** 06/17/2015 17:15:26

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 102.71% | 0.3607 | 18.1910 | 789.1900 | 772.3000 | 789.8600 | τ8393.7000 | 1304.6000 | 1980.7000 |
| 2 | 17:16:47 | 104.14% | 0.3577 | 18.3150 | 799.0600 | 772.2000 | 788.9900 | τ8364.3000 | 1327.6000 | 1991.2000 |
| 3 | 17:17:27 | 103.47% | 0.3814 | 18.2600 | 810.3900 | 792.7100 | 795.3800 | τ8416.6000 | 1309.0000 | 1979.2000 |
| 4 | 17:18:08 | 103.76% | 0.3615 | 18.1630 | 791.3300 | 786.1700 | 796.6500 | τ8244.8000 | 1316.0000 | 1978.9000 |
| 5 | 17:18:48 | 104.46% | 0.3592 | 17.6710 | 781.1200 | 780.0800 | 776.3900 | τ8266.9000 | 1301.8000 | 1958.1000 |
| x | | 103.71% | 0.3641 | 18.1200 | 794.2200 | 780.6900 | 789.4500 | τ8337.3000 | 1311.8000 | 1977.6000 |
| %RSD | | 0.65 | 2.6835 | 1.4240 | 1.3940 | 1.1411 | 1.0175 | τ0.9236 | 0.7885 | 0.6096 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 100.91% | 9.4067 | 15.6530 | 10.9500 | 6984.9000 | 390.0700 | τ7451.5000 | 6960.7000 | 5.7366 |
| 2 | 17:16:47 | 102.69% | 9.5452 | 15.4150 | 10.8060 | 7038.4000 | 391.5000 | τ7427.6000 | 6849.2000 | 5.6718 |
| 3 | 17:17:27 | 103.58% | 9.4086 | 15.4130 | 10.7830 | 6968.9000 | 389.9300 | τ7351.6000 | 6899.6000 | 5.6590 |
| 4 | 17:18:08 | 103.56% | 8.9739 | 15.2050 | 10.6470 | 6921.3000 | 385.9800 | τ7245.2000 | 6754.8000 | 5.6506 |
| 5 | 17:18:48 | 102.85% | 9.0173 | 14.9760 | 10.6110 | 6882.9000 | τ393.8200 | τ7262.4000 | 6826.0000 | 5.5956 |
| x | | 102.72% | 9.2703 | 15.3320 | 10.7590 | 6959.3000 | τ390.2600 | τ7347.7000 | 6858.1000 | 5.6627 |
| %RSD | | 1.06 | 2.7773 | 1.6608 | 1.2622 | 0.8584 | τ0.7325 | τ1.2723 | 1.1300 | 0.8919 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 5.9274 | 20.6950 | 21.0730 | 75.3380 | 2.0577 | 0.5687 | 0.8846 | -1.8198 | 97.65% |
| 2 | 17:16:47 | 6.0989 | 20.9430 | 21.2670 | 73.9960 | 2.1487 | 0.1637 | 0.6271 | -1.1515 | 97.70% |
| 3 | 17:17:27 | 5.9037 | 20.6680 | 20.7220 | 73.8850 | 1.9706 | 0.1138 | 0.6893 | -2.4941 | 98.53% |
| 4 | 17:18:08 | 6.1789 | 20.7210 | 20.7920 | 74.0170 | 1.9334 | 0.3070 | 0.2504 | -0.5286 | 98.92% |
| 5 | 17:18:48 | 5.9116 | 20.4380 | 20.3100 | 74.0880 | 1.7936 | 0.0300 | 0.3359 | -1.1723 | 98.56% |
| x | | 6.0041 | 20.6930 | 20.8330 | 74.2650 | 1.9808 | 0.2366 | 0.5574 | -1.4333 | 98.27% |
| %RSD | | 2.1077 | 0.8686 | 1.7520 | 0.8138 | 6.7509 | 89.2300 | 46.8320 | 52.2210 | 0.58 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.51% | 0.0324 | 0.1356 | 0.0389 |
| 2 | 17:16:47 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.63% | 0.0502 | -0.3774 | 0.0322 |
| 3 | 17:17:27 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.33% | 0.0385 | -0.7281 | 0.0390 |
| 4 | 17:18:08 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.77% | 0.0387 | -1.0244 | 0.0352 |
| 5 | 17:18:48 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 96.12% | 0.0424 | -0.2917 | 0.0225 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.27% | 0.0404 | -0.4572 | 0.0336 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.74 | 16.0980 | 96.6000 | 20.3230 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 0.3003 | 0.3051 | 0.0000 | 0.0000 | 0.0872 | 64.0660 | 65.8100 | 95.37% | 0.1075 |
| 2 | 17:16:47 | 0.2299 | 0.3372 | 0.0000 | 0.0000 | 0.0688 | 63.8410 | 66.3920 | 94.87% | 0.0990 |
| 3 | 17:17:27 | 0.2928 | 0.3174 | 0.0000 | 0.0000 | 0.0735 | 64.8040 | 65.6170 | 94.73% | 0.0968 |
| 4 | 17:18:08 | 0.2879 | 0.2520 | 0.0000 | 0.0000 | 0.0895 | 64.3550 | 64.9180 | 95.72% | 0.0876 |
| 5 | 17:18:48 | 0.2093 | 0.2541 | 0.0000 | 0.0000 | 0.0595 | 62.9820 | 64.0990 | 95.55% | 0.1005 |
| x | | 0.2640 | 0.2932 | 0.0000 | 0.0000 | 0.0757 | 64.0090 | 65.3670 | 95.25% | 0.0983 |
| %RSD | | 15.7060 | 13.0810 | 0.0000 | 0.0000 | 16.6980 | 1.0590 | 1.3506 | 0.45 | 7.3336 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:16:07 | 0.0912 | 33.8390 | 30.6770 | 31.5880 | 94.60% | 0.8747 |
| 2 | 17:16:47 | 0.0936 | 32.9320 | 30.3400 | 31.1060 | 95.60% | 0.1635 |
| 3 | 17:17:27 | 0.0944 | 33.4610 | 31.0930 | 31.6450 | 94.37% | 0.1726 |
| 4 | 17:18:08 | 0.0849 | 33.6870 | 30.2500 | 31.2470 | 95.95% | 0.1609 |
| 5 | 17:18:48 | 0.0956 | 32.9440 | 30.0460 | 30.8960 | 95.21% | -0.5330 |
| x | | 0.0919 | 33.3720 | 30.4810 | 31.2960 | 95.15% | 0.1677 |
| %RSD | | 4.6279 | 1.2558 | 1.3490 | 1.0181 | 0.70 | 296.7700 |

**MF9M35-5x** 06/17/2015 17:19:49

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 103.34% | 0.4069 | 19.8650 | 958.5400 | 942.8400 | 955.6900 | ┬9769.2000 | 1509.1000 | 2123.0000 |
| 2 | 17:21:10 | 104.03% | 0.4142 | 19.9220 | 965.8300 | 950.4700 | 948.3400 | ┬9717.4000 | 1497.0000 | 2117.9000 |
| 3 | 17:21:50 | 103.63% | 0.4243 | 20.0710 | 976.1200 | 948.2900 | 981.2800 | ┬9760.2000 | 1521.6000 | 2143.4000 |
| 4 | 17:22:30 | 103.65% | 0.4255 | 19.6330 | 974.5000 | 953.2300 | 965.7200 | ┬9683.2000 | ┬1504.7000 | 2133.6000 |
| 5 | 17:23:11 | 103.95% | 0.3972 | 19.3760 | 955.9100 | 945.2300 | 954.0500 | ┬9604.7000 | 1482.2000 | 2080.6000 |
| x | | 103.72% | 0.4136 | 19.7740 | 966.1800 | 948.0100 | 961.0200 | ┬9706.9000 | ┬1502.9000 | 2119.7000 |
| %RSD | | 0.27 | 2.8881 | 1.3785 | 0.9428 | 0.4345 | 1.3468 | ┬0.6878 | ┬0.9724 | 1.1312 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 101.60% | 9.2868 | 17.3980 | 12.1920 | 7552.4000 | 439.7800 | ┬7988.4000 | 7544.1000 | 7.2635 |
| 2 | 17:21:10 | 103.41% | 9.0664 | 17.3390 | 12.0820 | 7571.5000 | ┬443.8400 | ┬7997.0000 | 7521.0000 | 7.2214 |
| 3 | 17:21:50 | 102.39% | 9.4258 | 17.1440 | 12.1320 | 7648.7000 | ┬449.4200 | ┬8042.7000 | 7505.1000 | 7.1451 |
| 4 | 17:22:30 | 102.41% | 9.6059 | 17.2480 | 12.0720 | 7575.7000 | 435.9700 | ┬8002.7000 | 7475.1000 | 7.2160 |
| 5 | 17:23:11 | 103.04% | 9.1584 | 16.9680 | 11.9260 | 7511.1000 | ┬440.4500 | ┬7951.4000 | 7359.1000 | 7.1323 |
| x | | 102.57% | 9.3087 | 17.2190 | 12.0810 | 7571.9000 | ┬441.8900 | ┬7996.5000 | 7480.9000 | 7.1957 |
| %RSD | | 0.68 | 2.3031 | 0.9894 | 0.8165 | 0.6600 | ┬1.1431 | ┬0.4088 | 0.9697 | 0.7690 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 7.0314 | 20.9410 | 21.2010 | 88.2960 | 2.0486 | 0.4628 | -0.1207 | -0.4140 | 96.85% |
| 2 | 17:21:10 | 6.9148 | 20.7550 | 21.5010 | 85.7830 | 2.3723 | 0.7222 | 0.3375 | -0.4826 | 97.87% |
| 3 | 17:21:50 | 7.0236 | 21.1330 | 21.8260 | 87.2050 | 2.3894 | 0.3304 | 0.4399 | -1.1646 | 97.87% |
| 4 | 17:22:30 | 6.9026 | 21.3680 | 22.1790 | 86.9250 | 2.2018 | 0.3799 | -0.2395 | 1.0500 | 97.43% |
| 5 | 17:23:11 | 6.9619 | 20.7750 | 20.8270 | 87.3720 | 2.0843 | 0.1298 | 0.2208 | -0.9610 | 97.16% |
| x | | 6.9668 | 20.9940 | 21.5070 | 87.1160 | 2.2193 | 0.4050 | 0.1276 | -0.3944 | 97.44% |
| %RSD | | 0.8565 | 1.2316 | 2.4492 | 1.0393 | 7.1251 | 53.2260 | 230.7200 | 219.8800 | 0.46 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.83% | 0.0403 | -0.9786 | 0.0296 |
| 2 | 17:21:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.01% | 0.0386 | -0.7128 | 0.0366 |
| 3 | 17:21:50 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.69% | 0.0505 | -0.0856 | 0.0353 |
| 4 | 17:22:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.19% | 0.0435 | -0.6632 | 0.0391 |
| 5 | 17:23:11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.63% | 0.0294 | -0.8491 | 0.0281 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.87% | 0.0405 | -0.6579 | 0.0338 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.58 | 18.9370 | 52.1030 | 13.8900 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 0.2137 | 0.3440 | 0.0000 | 0.0000 | 0.0606 | 66.9410 | 68.9580 | 93.60% | 0.0926 |
| 2 | 17:21:10 | 0.3055 | 0.3085 | 0.0000 | 0.0000 | 0.0735 | 67.3430 | 69.5090 | 95.38% | 0.0971 |
| 3 | 17:21:50 | 0.2321 | 0.3251 | 0.0000 | 0.0000 | 0.0883 | 68.6370 | 69.6810 | 94.69% | 0.1119 |
| 4 | 17:22:30 | 0.2880 | 0.3178 | 0.0000 | 0.0000 | 0.0658 | 67.4880 | 69.3820 | 94.50% | 0.0958 |
| 5 | 17:23:11 | 0.3082 | 0.3320 | 0.0000 | 0.0000 | 0.0620 | 66.8980 | 68.3620 | 95.00% | 0.0825 |
| x | | 0.2695 | 0.3255 | 0.0000 | 0.0000 | 0.0700 | 67.4610 | 69.1790 | 94.63% | 0.0960 |
| %RSD | | 16.2320 | 4.1627 | 0.0000 | 0.0000 | 16.2090 | 1.0441 | 0.7641 | 0.70 | 11.0260 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:20:29 | 0.1032 | 37.4930 | 35.2610 | 35.5360 | 94.57% | -0.5330 |
| 2 | 17:21:10 | 0.1120 | 37.7950 | 34.9540 | 35.7840 | 94.52% | 0.1714 |
| 3 | 17:21:50 | 0.1073 | 37.8380 | 34.8870 | 35.7750 | 94.41% | -0.5330 |
| 4 | 17:22:30 | 0.1041 | 37.5500 | 33.9260 | 35.1600 | 96.50% | 0.1570 |
| 5 | 17:23:11 | 0.1019 | 36.9660 | 33.8930 | 34.9410 | 94.55% | 0.1712 |
| x | | 0.1057 | 37.5280 | 34.5840 | 35.4390 | 94.91% | -0.1133 |
| %RSD | | 3.8283 | 0.9280 | 1.8268 | 1.0622 | 0.94 | 338.2500 |

**MF9M37-5x** 06/17/2015 17:24:12

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 102.26% | 0.3409 | 35.0860 | 847.2200 | 837.7000 | 858.9100 | T8369.4000 | 1360.8000 | 4007.4000 |
| 2 | 17:25:32 | 103.66% | 0.3410 | 35.4700 | 864.7200 | 841.4000 | 867.3800 | T8395.6000 | 1363.3000 | 4030.8000 |
| 3 | 17:26:13 | 103.60% | 0.3249 | 34.9360 | 877.5800 | 855.0000 | 861.5000 | T8389.7000 | 1378.0000 | 4012.8000 |
| 4 | 17:26:54 | 103.31% | 0.3124 | 35.5530 | 870.3100 | 850.1200 | 854.3200 | T8324.3000 | 1377.4000 | 3996.5000 |
| 5 | 17:27:36 | 103.02% | 0.2821 | 34.4200 | 856.0900 | 843.5700 | 869.4500 | T8281.4000 | 1348.5000 | 4021.7000 |
| X | | 103.17% | 0.3202 | 35.0930 | 863.1800 | 845.5600 | 862.3100 | T8352.1000 | 1365.6000 | 4013.8000 |
| %RSD | | 0.55 | 7.6381 | 1.2986 | 1.3775 | 0.8216 | 0.7169 | T0.5795 | 0.9072 | 0.3275 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 99.84% | 11.6700 | 14.8600 | 11.0050 | 6903.9000 | T466.8600 | T7345.7000 | 6885.8000 | 4.3045 |
| 2 | 17:25:32 | 101.41% | 11.7900 | 15.1590 | 10.7730 | 6967.4000 | T471.3700 | T7346.4000 | 6976.3000 | 4.3739 |
| 3 | 17:26:13 | 101.71% | 11.6780 | 15.1590 | 10.9800 | 7008.0000 | T472.0000 | T7365.3000 | 6992.8000 | 4.5238 |
| 4 | 17:26:54 | 101.77% | 11.4950 | 14.8990 | 10.8230 | 6820.6000 | T464.5400 | T7247.8000 | 6815.7000 | 4.2954 |
| 5 | 17:27:36 | 101.80% | 11.3600 | 14.6250 | 10.5990 | 6814.3000 | T461.0400 | T7262.9000 | 6808.1000 | 4.2289 |
| X | | 101.31% | 11.5990 | 14.9400 | 10.8360 | 6902.8000 | T467.1600 | T7313.6000 | 6895.7000 | 4.3453 |
| %RSD | | 0.82 | 1.4682 | 1.5084 | 1.5248 | 1.2507 | T0.9903 | T0.7383 | 1.2582 | 2.5824 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 6.3399 | 21.3240 | 22.1710 | 108.8000 | 2.5019 | 0.6164 | 0.0338 | 0.1280 | 96.07% |
| 2 | 17:25:32 | 6.0664 | 21.1480 | 21.6820 | 108.8800 | 2.6146 | 0.5205 | -0.0181 | 0.3250 | 97.19% |
| 3 | 17:26:13 | 6.4085 | 21.4330 | 21.6430 | 109.7400 | 2.6473 | 0.2451 | 0.4752 | 0.0629 | 97.60% |
| 4 | 17:26:54 | 6.2663 | 21.2110 | 21.6930 | 108.4700 | 2.5131 | 0.2025 | 0.2203 | -1.0571 | 97.60% |
| 5 | 17:27:36 | 6.2356 | 20.7030 | 21.1050 | 108.7000 | 2.3318 | 0.2920 | -0.4435 | 0.9714 | 97.59% |
| X | | 6.2633 | 21.1640 | 21.6590 | 108.9200 | 2.5218 | 0.3753 | 0.0535 | 0.0860 | 97.21% |
| %RSD | | 2.0584 | 1.3224 | 1.7443 | 0.4446 | 4.8942 | 48.5750 | 632.0800 | 852.1100 | 0.68 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.92% | 0.0338 | -0.0806 | 0.0207 |
| 2 | 17:25:32 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.76% | 0.0367 | -0.2163 | 0.0209 |
| 3 | 17:26:13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.92% | 0.0313 | -0.0468 | 0.0301 |
| 4 | 17:26:54 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.35% | 0.0355 | -0.0196 | 0.0282 |
| 5 | 17:27:36 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.24% | 0.0365 | -0.3034 | 0.0232 |
| X | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.64% | 0.0348 | -0.1333 | 0.0246 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.54 | 6.4871 | 91.0860 | 17.4210 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 0.4355 | 0.4547 | 0.0000 | 0.0000 | 0.0661 | 90.3700 | 92.8280 | 93.81% | 0.0772 |
| 2 | 17:25:32 | 0.4755 | 0.4248 | 0.0000 | 0.0000 | 0.0751 | 90.0740 | 93.2580 | 95.95% | 0.0960 |
| 3 | 17:26:13 | 0.4790 | 0.4720 | 0.0000 | 0.0000 | 0.0771 | 90.1440 | 92.8430 | 94.46% | 0.0994 |
| 4 | 17:26:54 | 0.4354 | 0.4287 | 0.0000 | 0.0000 | 0.0536 | 88.4190 | 92.0190 | 95.61% | 0.0915 |
| 5 | 17:27:36 | 0.4183 | 0.4261 | 0.0000 | 0.0000 | 0.0614 | 89.1240 | 92.5330 | 96.48% | 0.0818 |
| X | | 0.4487 | 0.4413 | 0.0000 | 0.0000 | 0.0667 | 89.6260 | 92.6960 | 95.26% | 0.0892 |
| %RSD | | 6.0096 | 4.7870 | 0.0000 | 0.0000 | 14.6050 | 0.9222 | 0.4942 | 1.15 | 10.5290 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:24:52 | 0.0965 | 30.1000 | 28.4320 | 29.0400 | 94.05% | 0.1750 |
| 2 | 17:25:32 | 0.0945 | 31.1650 | 28.3460 | 29.4970 | 94.43% | 0.1721 |
| 3 | 17:26:13 | 0.0929 | 31.4370 | 29.3760 | 29.7140 | 94.69% | -0.5330 |
| 4 | 17:26:54 | 0.0921 | 30.5010 | 28.9930 | 29.2330 | 96.13% | -0.5330 |
| 5 | 17:27:36 | 0.0863 | 30.2720 | 27.8730 | 28.4690 | 95.86% | 0.8563 |
| X | | 0.0924 | 30.6950 | 28.6040 | 29.1910 | 95.03% | 0.0275 |
| %RSD | | 4.1136 | 1.8876 | 2.0524 | 1.6368 | 0.96 | 2122.3000 |

**MF9M38-5x** 06/17/2015 17:28:38

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 102.70% | 0.2875 | 35.0730 | 849.0600 | 850.5100 | 857.8000 | τ8987.5000 | 1256.4000 | 2860.4000 |
| 2 | 17:29:58 | 103.43% | 0.3107 | 34.8130 | 861.2400 | 858.0800 | 877.5700 | τ9006.6000 | 1275.1000 | 2878.7000 |
| 3 | 17:30:39 | 103.15% | 0.3251 | 35.6170 | 872.6800 | 863.0400 | 880.0500 | τ9095.8000 | 1293.1000 | 2901.4000 |
| 4 | 17:31:19 | 102.54% | 0.3011 | 35.5000 | 875.0700 | 875.1000 | 872.5800 | τ8972.8000 | 1275.8000 | 2896.4000 |
| 5 | 17:31:59 | 102.67% | 0.3278 | 35.2990 | 870.9200 | 853.2800 | 866.8800 | τ8896.6000 | 1250.5000 | 2824.0000 |
| x | | 102.90% | 0.3104 | 35.2600 | 865.7900 | 860.0100 | 870.9800 | τ8991.9000 | 1270.2000 | 2872.2000 |
| %RSD | | 0.37 | 5.4061 | 0.9208 | 1.2392 | 1.1276 | 1.0249 | τ0.7955 | 1.3399 | 1.0932 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 100.24% | 9.5500 | 15.4860 | 9.9023 | 6528.4000 | 247.3300 | τ6868.8000 | 6498.3000 | 5.4202 |
| 2 | 17:29:58 | 101.55% | 9.9440 | 16.0170 | 9.9413 | 6562.6000 | 252.5900 | τ6889.5000 | 6530.8000 | 5.4713 |
| 3 | 17:30:39 | 101.68% | 9.9474 | 16.1350 | 10.0790 | 6612.1000 | 252.6800 | τ7051.2000 | 6538.6000 | 5.6131 |
| 4 | 17:31:19 | 102.15% | 9.5858 | 16.2440 | 9.9615 | 6630.5000 | 253.2900 | τ6954.2000 | 6524.1000 | 5.6429 |
| 5 | 17:31:59 | 102.54% | 9.5086 | 15.5530 | 9.8336 | 6502.7000 | 248.2600 | τ6919.3000 | 6500.6000 | 5.4864 |
| x | | 101.63% | 9.7072 | 15.8870 | 9.9435 | 6567.3000 | 250.8300 | τ6936.6000 | 6518.5000 | 5.5268 |
| %RSD | | 0.86 | 2.2610 | 2.1775 | 0.9045 | 0.8239 | 1.1174 | τ1.0335 | 0.2779 | 1.7402 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 5.8487 | 29.4210 | 29.5540 | 71.9830 | 2.2904 | 0.5908 | 0.2235 | -0.9705 | 96.31% |
| 2 | 17:29:58 | 5.8892 | 29.2200 | 30.0940 | 73.7940 | 2.3652 | 0.5716 | -0.0182 | 0.5070 | 97.41% |
| 3 | 17:30:39 | 6.1451 | 30.0600 | 30.2010 | 73.5040 | 2.4414 | 0.3116 | -0.1720 | -0.6215 | 96.81% |
| 4 | 17:31:19 | 5.8309 | 29.6230 | 30.0960 | 74.6480 | 2.1676 | 0.3096 | -0.3262 | -0.7575 | 96.70% |
| 5 | 17:31:59 | 5.9653 | 29.6140 | 30.4060 | 72.8200 | 2.3786 | 0.3888 | 0.0166 | -0.6202 | 96.03% |
| x | | 5.9359 | 29.5870 | 30.0700 | 73.3500 | 2.3287 | 0.4345 | -0.0553 | -0.4925 | 96.65% |
| %RSD | | 2.1552 | 1.0529 | 1.0480 | 1.3726 | 4.5008 | 31.7290 | 374.4600 | 117.1000 | 0.55 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.70% | 0.0304 | 0.2416 | 0.0161 |
| 2 | 17:29:58 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.60% | 0.0299 | -0.0463 | 0.0192 |
| 3 | 17:30:39 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.17% | 0.0207 | -0.7383 | 0.0258 |
| 4 | 17:31:19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.10% | 0.0391 | -0.2769 | 0.0247 |
| 5 | 17:31:59 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.61% | 0.0261 | -0.6586 | 0.0247 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.24% | 0.0292 | -0.2957 | 0.0221 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.86 | 23.0010 | 139.3100 | 19.0450 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 0.1643 | 0.2431 | 0.0000 | 0.0000 | 0.0679 | 55.0180 | 57.5960 | 94.01% | 0.1170 |
| 2 | 17:29:58 | 0.1698 | 0.2907 | 0.0000 | 0.0000 | 0.0608 | 57.0730 | 58.6170 | 95.20% | 0.0926 |
| 3 | 17:30:39 | 0.1979 | 0.2622 | 0.0000 | 0.0000 | 0.0793 | 59.2810 | 58.7840 | 94.51% | 0.1166 |
| 4 | 17:31:19 | 0.1743 | 0.2050 | 0.0000 | 0.0000 | 0.0674 | 55.3760 | 57.8660 | 94.88% | 0.0968 |
| 5 | 17:31:59 | 0.1585 | 0.2690 | 0.0000 | 0.0000 | 0.0786 | 55.4630 | 57.0940 | 93.84% | 0.0949 |
| x | | 0.1730 | 0.2540 | 0.0000 | 0.0000 | 0.0708 | 56.4420 | 57.9910 | 94.49% | 0.1036 |
| %RSD | | 8.7660 | 12.7010 | 0.0000 | 0.0000 | 11.2040 | 3.1418 | 1.2183 | 0.61 | 11.7250 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:29:18 | 0.1029 | 31.8130 | 28.7370 | 29.7560 | 93.68% | -0.5330 |
| 2 | 17:29:58 | 0.0948 | 31.8250 | 29.6610 | 30.1520 | 95.55% | 0.1638 |
| 3 | 17:30:39 | 0.1007 | 32.2610 | 29.3620 | 30.3510 | 94.98% | -0.5330 |
| 4 | 17:31:19 | 0.1081 | 32.6090 | 29.5160 | 30.1880 | 94.34% | -0.5330 |
| 5 | 17:31:59 | 0.0951 | 31.4490 | 28.6010 | 29.6430 | 95.15% | 0.1668 |
| x | | 0.1003 | 31.9910 | 29.1760 | 30.0180 | 94.74% | -0.2537 |
| %RSD | | 5.5744 | 1.4050 | 1.6331 | 1.0088 | 0.78 | 150.7700 |

**MF9M39-5x** 06/17/2015 17:33:00

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 102.57% | 0.3029 | 33.0480 | 841.8700 | 832.1400 | 854.0600 | τ8780.6000 | 1197.0000 | 1990.6000 |
| 2 | 17:34:21 | 103.60% | 0.3063 | 33.0600 | 845.9700 | 840.7200 | 836.7400 | τ8853.1000 | 1217.2000 | 1980.5000 |
| 3 | 17:35:02 | 102.98% | 0.3634 | 32.6830 | 847.6500 | 851.7400 | 865.5300 | τ8908.3000 | 1212.3000 | 2016.9000 |
| 4 | 17:35:42 | 103.33% | 0.3379 | 33.8070 | 855.1300 | 838.7600 | 844.6200 | τ8829.9000 | 1208.0000 | 2006.5000 |
| 5 | 17:36:22 | 102.64% | 0.2804 | 32.2350 | 829.8900 | 826.4900 | 834.6400 | τ8707.8000 | 1184.9000 | 1973.2000 |
| x | | 103.02% | 0.3182 | 32.9670 | 844.1000 | 837.9700 | 847.1200 | τ8815.9000 | 1203.9000 | 1993.5000 |
| %RSD | | 0.43 | 10.2180 | 1.7535 | 1.0996 | 1.1381 | 1.5128 | τ0.8609 | 1.0783 | 0.9064 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 99.98% | 10.3140 | 17.4100 | 9.9534 | 7347.9000 | 244.9100 | τ7876.4000 | 7335.1000 | 5.0146 |
| 2 | 17:34:21 | 100.62% | 10.5030 | 17.0160 | 9.8845 | 7506.1000 | 246.9600 | τ7911.5000 | 7365.7000 | 5.0576 |
| 3 | 17:35:02 | 102.24% | 10.4420 | 16.9460 | 9.7047 | 7464.0000 | 246.3200 | τ7777.9000 | 7333.6000 | 5.0221 |
| 4 | 17:35:42 | 101.97% | 10.3030 | 17.2720 | 9.8297 | 7388.4000 | 248.0900 | τ7817.6000 | 7264.7000 | 5.0270 |
| 5 | 17:36:22 | 101.97% | 10.2780 | 17.1100 | 9.5861 | 7352.1000 | 244.6900 | τ7755.8000 | 7194.3000 | 4.9756 |
| x | | 101.36% | 10.3680 | 17.1510 | 9.7917 | 7411.7000 | 246.1900 | τ7827.9000 | 7298.7000 | 5.0194 |
| %RSD | | 0.98 | 0.9513 | 1.1051 | 1.4978 | 0.9497 | 0.5779 | τ0.8365 | 0.9465 | 0.5864 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 5.3272 | 30.0730 | 30.8940 | 34.1740 | 2.4734 | 0.2109 | -0.0353 | -0.5314 | 95.58% |
| 2 | 17:34:21 | 5.4688 | 30.3710 | 31.3300 | 34.7660 | 2.7166 | 0.3117 | 0.0677 | -0.3351 | 96.92% |
| 3 | 17:35:02 | 5.4701 | 30.6290 | 30.7050 | 36.0290 | 2.6410 | 0.3023 | -0.3442 | 1.1592 | 96.57% |
| 4 | 17:35:42 | 5.5752 | 30.6620 | 31.0380 | 35.2560 | 2.4786 | 0.6060 | 0.2750 | 0.4578 | 95.98% |
| 5 | 17:36:22 | 5.3358 | 29.9010 | 30.1740 | 35.0810 | 2.5988 | 0.2656 | -0.1892 | 0.4911 | 96.89% |
| x | | 5.4354 | 30.3270 | 30.8280 | 35.0610 | 2.5817 | 0.3393 | -0.0452 | 0.2483 | 96.39% |
| %RSD | | 1.9182 | 1.1072 | 1.3978 | 1.9386 | 4.0791 | 45.4590 | 525.5100 | 276.1200 | 0.61 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.06% | 0.0312 | -0.5016 | 0.0195 |
| 2 | 17:34:21 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.45% | 0.0265 | -0.8096 | 0.0200 |
| 3 | 17:35:02 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.57% | 0.0285 | -0.4328 | 0.0169 |
| 4 | 17:35:42 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.99% | 0.0248 | -0.3281 | 0.0212 |
| 5 | 17:36:22 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.62% | 0.0260 | -0.1256 | 0.0250 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.14% | 0.0274 | -0.4396 | 0.0205 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.69 | 9.1704 | 57.0780 | 14.4780 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 0.0944 | 0.1093 | 0.0000 | 0.0000 | 0.0668 | 52.3630 | 55.2550 | 93.10% | 0.0910 |
| 2 | 17:34:21 | 0.1138 | 0.1373 | 0.0000 | 0.0000 | 0.0671 | 53.3630 | 56.0620 | 95.21% | 0.0981 |
| 3 | 17:35:02 | 0.0817 | 0.1148 | 0.0000 | 0.0000 | 0.0705 | 53.6760 | 56.3520 | 94.78% | 0.0937 |
| 4 | 17:35:42 | 0.0766 | 0.1173 | 0.0000 | 0.0000 | 0.0896 | 53.8650 | 55.8000 | 94.33% | 0.1018 |
| 5 | 17:36:22 | 0.0283 | 0.1387 | 0.0000 | 0.0000 | 0.0803 | 52.4250 | 54.8890 | 95.59% | 0.0939 |
| x | | 0.0790 | 0.1235 | 0.0000 | 0.0000 | 0.0749 | 53.1380 | 55.6720 | 94.60% | 0.0957 |
| %RSD | | 40.1960 | 10.9950 | 0.0000 | 0.0000 | 13.2120 | 1.3233 | 1.0696 | 1.02 | 4.4635 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:33:41 | 0.0891 | 15.3600 | 14.4110 | 14.7760 | 93.26% | 0.1809 |
| 2 | 17:34:21 | 0.0921 | 15.6790 | 14.4980 | 14.9580 | 94.15% | 0.8814 |
| 3 | 17:35:02 | 0.0915 | 16.1620 | 14.6190 | 15.0570 | 94.55% | -0.5330 |
| 4 | 17:35:42 | 0.0819 | 15.9380 | 14.3510 | 14.9970 | 94.61% | -0.5330 |
| 5 | 17:36:22 | 0.0999 | 15.5740 | 14.2180 | 14.6430 | 95.42% | -0.5330 |
| x | | 0.0909 | 15.7430 | 14.4190 | 14.8860 | 94.40% | -0.1074 |
| %RSD | | 7.1146 | 1.9916 | 1.0479 | 1.1528 | 0.83 | 589.9500 |

**MF9M40-5x** 06/17/2015 17:37:24

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 103.53% | 0.5106 | 40.4680 | 1147.7000 | 1125.8000 | 1138.1000 | ┬12502.0000 | ┬1835.4000 | 4580.8000 |
| 2 | 17:38:44 | 103.29% | 0.5277 | 40.6890 | 1143.5000 | 1112.6000 | 1133.6000 | ┬12512.0000 | 1846.7000 | 4565.1000 |
| 3 | 17:39:24 | 102.44% | 0.5213 | 41.4090 | 1136.5000 | 1131.1000 | 1152.8000 | ┬12822.0000 | ┬1855.2000 | 4643.6000 |
| 4 | 17:40:05 | 102.86% | 0.4874 | 41.4760 | 1146.6000 | 1110.4000 | 1135.4000 | ┬12484.0000 | ┬1830.1000 | 4618.2000 |
| 5 | 17:40:45 | 102.74% | 0.4734 | 40.1100 | 1133.4000 | 1100.5000 | 1128.1000 | ┬12457.0000 | ┬1797.4000 | 4623.8000 |
| x | | 102.97% | 0.5041 | 40.8310 | 1141.6000 | 1116.1000 | 1137.6000 | ┬12555.0000 | ┬1833.0000 | 4606.3000 |
| %RSD | | 0.42 | 4.5602 | 1.4601 | 0.5506 | 1.1045 | 0.8138 | ┬1.2002 | ┬1.2088 | 0.7021 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 100.15% | 14.7550 | 22.6950 | 15.6960 | 11229.0000 | ┬547.9000 | ┬11804.0000 | 11178.0000 | 5.9393 |
| 2 | 17:38:44 | 100.84% | 14.6860 | 22.6350 | 15.7130 | 11232.0000 | ┬542.4400 | ┬11657.0000 | 11002.0000 | 5.9426 |
| 3 | 17:39:24 | 100.60% | 14.8310 | 22.8680 | 15.6240 | 11164.0000 | ┬545.3300 | ┬11760.0000 | 11081.0000 | 6.0147 |
| 4 | 17:40:05 | 101.77% | 14.4910 | 22.1810 | 15.5620 | 11066.0000 | ┬537.3400 | ┬11588.0000 | 10903.0000 | 6.0875 |
| 5 | 17:40:45 | 100.89% | 14.4990 | 21.9860 | 15.4000 | 11118.0000 | ┬532.1000 | ┬11469.0000 | 10817.0000 | 5.7537 |
| x | | 100.85% | 14.6520 | 22.4730 | 15.5990 | 11162.0000 | ┬541.0200 | ┬11656.0000 | 10996.0000 | 5.9476 |
| %RSD | | 0.59 | 1.0405 | 1.6560 | 0.8104 | 0.6433 | ┬1.1731 | ┬1.1519 | 1.2952 | 2.0895 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 9.2257 | 29.3020 | 29.5890 | 74.9500 | 4.0987 | -0.0087 | 0.5009 | -0.7207 | 95.98% |
| 2 | 17:38:44 | 9.2092 | 29.4910 | 29.5120 | 74.1970 | 4.3490 | 0.6024 | 0.8715 | -2.7569 | 97.18% |
| 3 | 17:39:24 | 9.3373 | 29.3940 | 30.4660 | 75.5420 | 4.2285 | 0.3928 | 0.4808 | -1.0006 | 96.55% |
| 4 | 17:40:05 | 9.2631 | 29.2850 | 29.6000 | 73.4070 | 4.0838 | 0.3069 | -0.1877 | -0.7284 | 97.79% |
| 5 | 17:40:45 | 9.2892 | 28.6600 | 29.2440 | 74.0640 | 4.2142 | 0.0757 | 0.8161 | -1.4037 | 97.69% |
| x | | 9.2649 | 29.2260 | 29.6820 | 74.4320 | 4.1949 | 0.2738 | 0.4963 | -1.3220 | 97.04% |
| %RSD | | 0.5522 | 1.1186 | 1.5540 | 1.1121 | 2.5802 | 89.8870 | 84.9490 | 64.2160 | 0.79 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 91.85% | 0.0638 | -0.8951 | 0.0510 |
| 2 | 17:38:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.07% | 0.0708 | -0.3846 | 0.0673 |
| 3 | 17:39:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.57% | 0.0753 | -0.0881 | 0.0668 |
| 4 | 17:40:05 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.68% | 0.0762 | -0.5889 | 0.0587 |
| 5 | 17:40:45 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.35% | 0.0715 | -0.5839 | 0.0618 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.90% | 0.0715 | -0.5081 | 0.0611 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.73 | 6.8767 | 58.5170 | 10.9870 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 0.3032 | 0.3750 | 0.0000 | 0.0000 | 0.1712 | 100.8500 | 101.4800 | 92.78% | 0.1251 |
| 2 | 17:38:44 | 0.3068 | 0.4221 | 0.0000 | 0.0000 | 0.1470 | 99.0050 | 102.2700 | 93.37% | 0.1284 |
| 3 | 17:39:24 | 0.2858 | 0.3853 | 0.0000 | 0.0000 | 0.1986 | 98.2120 | 103.6400 | 94.18% | 0.1399 |
| 4 | 17:40:05 | 0.3598 | 0.4323 | 0.0000 | 0.0000 | 0.1903 | 100.8500 | 103.4200 | 93.34% | 0.1296 |
| 5 | 17:40:45 | 0.3946 | 0.3856 | 0.0000 | 0.0000 | 0.1713 | 97.1460 | 99.6570 | 94.82% | 0.1338 |
| x | | 0.3301 | 0.4000 | 0.0000 | 0.0000 | 0.1757 | 99.2120 | 102.0900 | 93.70% | 0.1314 |
| %RSD | | 13.7790 | 6.3510 | 0.0000 | 0.0000 | 11.3890 | 1.6456 | 1.5876 | 0.85 | 4.3358 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:38:04 | 0.1227 | 32.5010 | 29.8250 | 30.5420 | 92.57% | -0.5330 |
| 2 | 17:38:44 | 0.1457 | 31.6930 | 29.6030 | 30.3240 | 93.20% | -0.5330 |
| 3 | 17:39:24 | 0.1360 | 32.6130 | 30.0170 | 30.6180 | 93.74% | 0.1773 |
| 4 | 17:40:05 | 0.1340 | 32.1580 | 30.0240 | 30.7190 | 94.08% | 0.1747 |
| 5 | 17:40:45 | 0.1355 | 31.9230 | 28.8000 | 30.0410 | 94.22% | -0.5330 |
| x | | 0.1348 | 32.1780 | 29.6540 | 30.4490 | 93.56% | -0.2494 |
| %RSD | | 6.0775 | 1.1969 | 1.7121 | 0.8880 | 0.73 | 155.7000 |

MF9M41-5x 06/17/2015 17:41:47

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 104.68% | 0.4214 | 39.4370 | 919.1100 | 907.5300 | 925.5500 | T12904.0000 | T1718.5000 | 1499.1000 |
| 2 | 17:43:09 | 105.31% | 0.3750 | 39.9730 | 923.2300 | 923.2300 | 926.4800 | T13013.0000 | 1738.7000 | 1501.0000 |
| 3 | 17:43:49 | 103.78% | 0.4660 | 40.3040 | 939.0800 | 927.9800 | 945.6700 | T13044.0000 | 1746.7000 | 1474.7000 |
| 4 | 17:44:30 | 104.07% | 0.4811 | 40.4620 | 935.9800 | 922.0700 | 932.7300 | T12959.0000 | 1742.6000 | 1476.3000 |
| 5 | 17:45:10 | 105.76% | 0.4257 | 39.8980 | 918.0500 | 905.6000 | 907.6800 | T12670.0000 | T1669.4000 | 1465.5000 |
| x | | 104.72% | 0.4338 | 40.0150 | 927.0900 | 917.2800 | 927.6200 | T12918.0000 | T1723.2000 | 1483.3000 |
| %RSD | | 0.79 | 9.6101 | 0.9945 | 1.0558 | 1.0963 | 1.4811 | T1.1506 | T1.8564 | 1.0684 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 102.14% | 15.1250 | 23.3540 | 15.6580 | 10485.0000 | T457.6700 | T11063.0000 | 10423.0000 | 6.5860 |
| 2 | 17:43:09 | 102.27% | 15.2060 | 23.6940 | 15.6210 | 10619.0000 | T461.6900 | T11081.0000 | 10378.0000 | 6.6685 |
| 3 | 17:43:49 | 104.19% | 15.0920 | 23.2650 | 15.4170 | 10450.0000 | T456.3300 | T10926.0000 | 10336.0000 | 6.5955 |
| 4 | 17:44:30 | 103.33% | 14.9920 | 23.6940 | 15.5140 | 10478.0000 | 445.7800 | T10841.0000 | 10189.0000 | 6.5788 |
| 5 | 17:45:10 | 103.50% | 14.6190 | 23.3920 | 15.3260 | 10359.0000 | T451.8400 | T10669.0000 | 10077.0000 | 6.5459 |
| x | | 103.09% | 15.0070 | 23.4800 | 15.5070 | 10478.0000 | T454.6600 | T10916.0000 | 10281.0000 | 6.5949 |
| %RSD | | 0.84 | 1.5307 | 0.8560 | 0.8922 | 0.8892 | T1.3384 | T1.5547 | 1.3977 | 0.6849 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 7.9677 | 35.1390 | 35.4920 | 24.8140 | 3.1532 | 0.0920 | 0.0504 | 0.6603 | 96.63% |
| 2 | 17:43:09 | 7.9080 | 35.7730 | 36.0800 | 25.5640 | 3.3432 | 0.5483 | 1.0356 | -1.4182 | 97.64% |
| 3 | 17:43:49 | 7.6725 | 34.9960 | 35.8990 | 25.0950 | 3.2232 | 0.1084 | 0.3365 | -0.8679 | 98.11% |
| 4 | 17:44:30 | 7.9241 | 35.4420 | 36.2530 | 25.6650 | 3.3150 | -0.1184 | 0.4229 | -1.0243 | 97.73% |
| 5 | 17:45:10 | 7.9707 | 34.2150 | 34.7530 | 24.6720 | 3.0224 | -0.1026 | -0.3048 | 0.3013 | 98.30% |
| x | | 7.8886 | 35.1130 | 35.6950 | 25.1620 | 3.2114 | 0.1056 | 0.3081 | -0.4698 | 97.68% |
| %RSD | | 1.5698 | 1.6633 | 1.6745 | 1.7551 | 4.0403 | 254.9600 | 161.0800 | 191.5000 | 0.66 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.45% | 0.0365 | -0.1355 | 0.0214 |
| 2 | 17:43:09 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.47% | 0.0380 | -0.6728 | 0.0364 |
| 3 | 17:43:49 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.34% | 0.0275 | -0.6233 | 0.0317 |
| 4 | 17:44:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.18% | 0.0445 | -0.6022 | 0.0304 |
| 5 | 17:45:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.52% | 0.0473 | -0.3512 | 0.0241 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.59% | 0.0388 | -0.4770 | 0.0288 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.85 | 19.9110 | 47.7910 | 21.0090 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 0.0423 | 0.1454 | 0.0000 | 0.0000 | 0.0798 | 73.6960 | 75.5780 | 94.37% | 0.1254 |
| 2 | 17:43:09 | 0.1060 | 0.1443 | 0.0000 | 0.0000 | 0.0962 | 74.9350 | 76.3830 | 93.40% | 0.1373 |
| 3 | 17:43:49 | 0.0684 | 0.1169 | 0.0000 | 0.0000 | 0.0695 | 74.8180 | 76.9420 | 94.95% | 0.1358 |
| 4 | 17:44:30 | 0.0379 | 0.1615 | 0.0000 | 0.0000 | 0.0810 | 74.0780 | 76.3630 | 94.43% | 0.1275 |
| 5 | 17:45:10 | 0.0587 | 0.1325 | 0.0000 | 0.0000 | 0.0672 | 72.6870 | 74.8280 | 94.81% | 0.1493 |
| x | | 0.0627 | 0.1401 | 0.0000 | 0.0000 | 0.0787 | 74.0430 | 76.0190 | 94.39% | 0.1351 |
| %RSD | | 43.3640 | 11.8330 | 0.0000 | 0.0000 | 14.6040 | 1.2372 | 1.0840 | 0.64 | 7.0164 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:42:27 | 0.1343 | 15.3620 | 14.5560 | 14.7970 | 94.44% | 1.5822 |
| 2 | 17:43:09 | 0.1373 | 15.5410 | 14.4730 | 14.9000 | 93.62% | -0.5330 |
| 3 | 17:43:49 | 0.1447 | 15.5340 | 14.3040 | 14.8270 | 94.49% | -0.5330 |
| 4 | 17:44:30 | 0.1385 | 15.7930 | 14.3870 | 14.8570 | 94.21% | -0.5330 |
| 5 | 17:45:10 | 0.1414 | 15.1760 | 14.0450 | 14.5860 | 94.84% | -0.5330 |
| x | | 0.1392 | 15.4810 | 14.3530 | 14.7930 | 94.32% | -0.1100 |
| %RSD | | 2.8603 | 1.4832 | 1.3677 | 0.8261 | 0.48 | 860.1100 |

**CCV3** 06/17/2015 17:46:44

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | 94.80% | τ2565.5000 | τ50058.0000 | τ49811.0000 | τ48942.0000 | τ48941.0000 | τ48332.0000 | τ47882.0000 | 50170.0000 |
| 2 | 17:48:04 | 93.54% | τ2612.8000 | τ49887.0000 | τ50697.0000 | τ49889.0000 | τ49431.0000 | τ48666.0000 | τ48071.0000 | 50583.0000 |
| 3 | 17:48:44 | 93.92% | τ2604.9000 | τ50125.0000 | τ50464.0000 | τ49666.0000 | τ49046.0000 | τ48451.0000 | τ48153.0000 | 50598.0000 |
| 4 | 17:49:25 | 94.31% | τ2577.1000 | τ50569.0000 | τ50408.0000 | τ49587.0000 | τ49435.0000 | τ48446.0000 | τ48353.0000 | 50048.0000 |
| 5 | 17:50:05 | 94.23% | τ2557.9000 | τ49422.0000 | τ49587.0000 | τ49412.0000 | τ48165.0000 | τ47918.0000 | τ47857.0000 | 50047.0000 |
| x | | 94.16% | τ2583.6000 | τ50012.0000 | τ50193.0000 | τ49499.0000 | τ49004.0000 | τ48362.0000 | τ48063.0000 | 50289.0000 |
| %RSD | | 0.50 | τ0.9354 | τ0.8294 | τ0.9382 | τ0.7180 | τ1.0597 | τ0.5714 | τ0.4259 | 0.5563 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | 91.13% | 0.0228 | τ2581.3000 | τ2491.5000 | τ49797.0000 | τ2471.9000 | τ48936.0000 | 47626.0000 | τ2466.6000 |
| 2 | 17:48:04 | 91.45% | 0.0191 | τ2628.9000 | τ2514.0000 | τ49380.0000 | τ2470.4000 | τ48911.0000 | 47729.0000 | τ2482.2000 |
| 3 | 17:48:44 | 92.93% | 0.0116 | τ2597.5000 | τ2481.0000 | τ49797.0000 | τ2434.1000 | τ48609.0000 | 47668.0000 | τ2479.5000 |
| 4 | 17:49:25 | 93.25% | 0.0219 | τ2551.0000 | τ2468.6000 | τ49308.0000 | τ2453.2000 | τ48195.0000 | 47031.0000 | τ2465.9000 |
| 5 | 17:50:05 | 93.06% | 0.0185 | τ2584.7000 | τ2487.0000 | τ49018.0000 | τ2418.3000 | τ47725.0000 | 47082.0000 | τ2439.4000 |
| x | | 92.37% | 0.0188 | τ2588.7000 | τ2488.4000 | τ49460.0000 | τ2449.6000 | τ48475.0000 | 47427.0000 | τ2466.7000 |
| %RSD | | 1.07 | 23.3930 | τ1.0894 | τ0.6708 | τ0.6793 | τ0.9488 | τ1.0628 | 0.7188 | τ0.6862 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | 2470.6000 | τ2403.5000 | τ2413.2000 | 2369.9000 | 2489.3000 | 262.5200 | 258.9800 | -0.2403 | 84.18% |
| 2 | 17:48:04 | 2493.5000 | τ2427.4000 | τ2440.0000 | 2363.4000 | 2508.5000 | 262.9300 | 261.0200 | 0.3178 | 84.79% |
| 3 | 17:48:44 | 2473.7000 | τ2401.2000 | τ2437.9000 | 2363.2000 | 2510.9000 | 261.5300 | 262.5800 | 1.4483 | 84.53% |
| 4 | 17:49:25 | 2477.0000 | τ2393.4000 | τ2424.1000 | 2370.0000 | 2485.8000 | 264.9200 | 256.0000 | 2.0308 | 85.94% |
| 5 | 17:50:05 | 2433.0000 | τ2380.3000 | τ2395.2000 | 2343.4000 | 2483.5000 | 262.3800 | 259.1800 | 0.9248 | 85.39% |
| x | | 2469.6000 | τ2401.1000 | τ2422.1000 | 2362.0000 | 2495.6000 | 262.8600 | 259.5500 | 0.8963 | 84.97% |
| %RSD | | 0.9023 | τ0.7181 | τ0.7656 | 0.4617 | 0.5245 | 0.4800 | 0.9511 | 100.0900 | 0.82 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.44% | 264.6300 | -19.0460 | 264.7700 |
| 2 | 17:48:04 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.40% | 270.3200 | -35.1180 | 266.3100 |
| 3 | 17:48:44 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 81.52% | 273.7400 | -23.7380 | 273.5700 |
| 4 | 17:49:25 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.98% | 274.9600 | -20.4400 | 272.9900 |
| 5 | 17:50:05 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 83.48% | 265.0700 | -34.3000 | 262.0000 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 82.56% | 269.7400 | -26.5280 | 267.9300 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.89 | 1.7725 | 28.8940 | 1.9143 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | 2460.5000 | τ2532.5000 | 0.0000 | 0.0000 | τ2576.7000 | 2427.8000 | 2559.3000 | 85.68% | τ2587.7000 |
| 2 | 17:48:04 | 2476.8000 | τ2539.7000 | 0.0000 | 0.0000 | τ2588.8000 | 2467.5000 | 2585.3000 | 85.47% | τ2603.1000 |
| 3 | 17:48:44 | 2510.3000 | τ2550.9000 | 0.0000 | 0.0000 | τ2599.7000 | 2484.8000 | 2614.9000 | 85.18% | τ2606.8000 |
| 4 | 17:49:25 | 2489.7000 | τ2531.8000 | 0.0000 | 0.0000 | τ2609.1000 | 2485.4000 | 2561.7000 | 86.11% | τ2591.5000 |
| 5 | 17:50:05 | 2441.5000 | τ2511.4000 | 0.0000 | 0.0000 | τ2556.5000 | 2442.5000 | 2538.6000 | 86.32% | τ2542.3000 |
| x | | 2475.8000 | τ2533.3000 | 0.0000 | 0.0000 | τ2586.2000 | 2461.6000 | 2572.0000 | 85.75% | τ2586.3000 |
| %RSD | | 1.0675 | τ0.5701 | 0.0000 | 0.0000 | τ0.7938 | 1.0454 | 1.1339 | 0.54 | τ0.9997 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:47:24 | τ2601.3000 | τ2596.7000 | τ2599.9000 | τ2589.6000 | 81.27% | -0.5330 |
| 2 | 17:48:04 | τ2620.9000 | τ2587.7000 | τ2607.7000 | τ2608.5000 | 81.26% | 2.7448 |
| 3 | 17:48:44 | τ2621.8000 | τ2599.5000 | τ2628.5000 | τ2630.3000 | 82.02% | 0.2788 |
| 4 | 17:49:25 | τ2605.3000 | τ2572.9000 | τ2597.9000 | τ2594.7000 | 82.93% | 1.8756 |
| 5 | 17:50:05 | τ2566.8000 | τ2539.1000 | τ2562.4000 | τ2563.5000 | 83.28% | 1.0661 |
| x | | τ2603.2000 | τ2579.2000 | τ2599.3000 | τ2597.3000 | 82.15% | 1.0864 |
| %RSD | | τ0.8565 | τ0.9571 | τ0.9194 | τ0.9479 | 1.14 | 118.6600 |

**CCB3** 06/17/2015 17:51:09

User Pre-dilution: 1.000

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 104.19% | 0.5841 | 13.4690 | 9.0743 | 8.5541 | 8.9930 | 8.5285 | 12.2190 | 4.4711 |
| 2 | 17:52:30 | 105.00% | 0.4864 | 11.0530 | 7.2519 | 6.7362 | 7.8768 | 6.7732 | 9.8592 | 2.6111 |
| 3 | 17:53:10 | 105.44% | 0.3894 | 9.2497 | 5.8432 | 6.0502 | 5.8909 | 5.1608 | 6.0981 | 2.0591 |
| 4 | 17:53:51 | 106.77% | 0.2940 | 8.2431 | 4.6674 | 4.6069 | 4.6924 | 4.2118 | 4.4200 | 0.9397 |
| 5 | 17:54:31 | 106.48% | 0.2341 | 5.9973 | 3.5787 | 4.2029 | 3.8989 | 3.2188 | 0.7870 | -2.0351 |
| x | | 105.58% | 0.3976 | 9.6023 | 6.0831 | 6.0300 | 6.2704 | 5.5786 | 6.6767 | 1.6092 |
| %RSD | | 1.01 | 35.6110 | 29.4660 | 35.4930 | 29.0020 | 34.0660 | 37.7510 | 67.3830 | 149.4200 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 97.15% | 0.0005 | 0.5156 | 0.4929 | 7.2863 | 0.4338 | -0.6667 | 13.2400 | 0.4691 |
| 2 | 17:52:30 | 99.62% | 0.0066 | 0.4197 | 0.3349 | 4.8513 | 0.3537 | -3.3787 | 6.6376 | 0.3533 |
| 3 | 17:53:10 | 101.23% | 0.0015 | 0.3038 | 0.2201 | 3.8336 | 0.2896 | -4.3169 | 7.3349 | 0.2908 |
| 4 | 17:53:51 | 100.91% | 0.0143 | 0.3090 | 0.1961 | 2.0257 | 0.2447 | -4.4086 | 7.0752 | 0.2486 |
| 5 | 17:54:31 | 102.41% | -0.0003 | 0.2689 | 0.1395 | -0.5141 | 0.1900 | -7.1078 | 5.9995 | 0.1618 |
| x | | 100.26% | 0.0045 | 0.3634 | 0.2767 | 3.4966 | 0.3024 | -3.9757 | 8.0575 | 0.3047 |
| %RSD | | 2.00 | 135.8300 | 28.1250 | 50.6710 | 84.0650 | 31.3810 | 58.2050 | 36.5000 | 37.8270 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 0.4529 | 0.8525 | 0.6932 | 0.4394 | 0.7234 | 1.6220 | 0.1456 | -1.7751 | 91.25% |
| 2 | 17:52:30 | 0.3941 | 0.7422 | 0.5278 | 0.3859 | 0.4110 | 1.6377 | -0.3017 | -1.1326 | 93.20% |
| 3 | 17:53:10 | 0.2907 | 0.6034 | 0.3914 | 0.2890 | 0.5077 | 1.6837 | 0.2118 | -1.2610 | 93.50% |
| 4 | 17:53:51 | 0.2303 | 0.5143 | 0.3304 | 0.1752 | 0.3147 | 1.6480 | -0.0704 | -1.0433 | 94.22% |
| 5 | 17:54:31 | 0.1756 | 0.4622 | 0.3181 | 0.1415 | 0.1862 | 1.0949 | -0.6090 | -0.5048 | 95.00% |
| x | | 0.3087 | 0.6349 | 0.4522 | 0.2862 | 0.4286 | 1.5373 | -0.1248 | -1.1434 | 93.43% |
| %RSD | | 37.0350 | 25.4280 | 35.0240 | 45.1150 | 47.4100 | 16.1550 | 270.3700 | 39.8590 | 1.50 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 92.19% | 0.1623 | -0.4184 | 0.1400 |
| 2 | 17:52:30 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.60% | 0.0988 | 0.1547 | 0.1185 |
| 3 | 17:53:10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 93.89% | 0.1103 | -0.5131 | 0.0954 |
| 4 | 17:53:51 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.45% | 0.0727 | 0.0483 | 0.0715 |
| 5 | 17:54:31 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 95.19% | 0.0400 | -0.3388 | 0.0385 |
| x | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 94.06% | 0.0968 | -0.2135 | 0.0928 |
| %RSD | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.40 | 47.0340 | 138.8800 | 42.7810 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 0.4796 | 0.4827 | 0.0000 | 0.0000 | 2.0104 | 0.5940 | 0.4504 | 92.34% | 0.8375 |
| 2 | 17:52:30 | 0.3226 | 0.3277 | 0.0000 | 0.0000 | 1.3651 | 0.3874 | 0.3993 | 94.02% | 0.5748 |
| 3 | 17:53:10 | 0.3675 | 0.2493 | 0.0000 | 0.0000 | 1.0640 | 0.2953 | 0.2817 | 94.96% | 0.4220 |
| 4 | 17:53:51 | 0.2253 | 0.2633 | 0.0000 | 0.0000 | 0.8812 | 0.1968 | 0.2283 | 94.54% | 0.3360 |
| 5 | 17:54:31 | 0.2162 | 0.1701 | 0.0000 | 0.0000 | 0.6714 | 0.1709 | 0.1789 | 96.17% | 0.2578 |
| x | | 0.3223 | 0.2986 | 0.0000 | 0.0000 | 1.1984 | 0.3289 | 0.3077 | 94.41% | 0.4856 |
| %RSD | | 33.8040 | 39.2430 | 0.0000 | 0.0000 | 43.4290 | 52.0540 | 37.1670 | 1.48 | 47.1920 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| 1 | 17:51:50 | 0.8026 | 0.4934 | 0.4949 | 0.5126 | 93.18% | 0.8961 |
| 2 | 17:52:30 | 0.5486 | 0.4142 | 0.4174 | 0.4174 | 95.58% | -0.5330 |
| 3 | 17:53:10 | 0.4075 | 0.3645 | 0.3214 | 0.3307 | 97.59% | -0.5330 |
| 4 | 17:53:51 | 0.3291 | 0.3058 | 0.2953 | 0.2888 | 96.81% | 0.1548 |
| 5 | 17:54:31 | 0.2563 | 0.2231 | 0.2227 | 0.2161 | 99.04% | 0.1393 |
| x | | 0.4688 | 0.3602 | 0.3503 | 0.3531 | 96.44% | 0.0248 |
| %RSD | | 46.0230 | 28.5920 | 30.4530 | 32.5900 | 2.29 | 2394.5000 |

## Mass Uncorrected ICPS

**S0** 06/17/2015 14:32:54

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 216071.1900 | 32.5001 | 26798.0190 | 205.0025 | 20.0000 | 60.0002 | 3403.1948 | 42978.0420 | 407.5100 |
| 2 | 14:34:15 | 221017.5700 | 17.5000 | 27249.4790 | 295.0052 | 20.0000 | 35.0001 | 3435.7081 | 44091.3350 | 422.5107 |
| 3 | 14:34:55 | 220582.0900 | 29.1667 | 27708.4890 | 235.0033 | 20.0000 | 20.0000 | 3698.3205 | 43458.0210 | 305.0056 |
| 4 | 14:35:35 | 219403.2400 | 25.8334 | 27944.2750 | 300.0054 | 35.0001 | 45.0001 | 4938.9632 | 44056.1500 | 480.0138 |
| 5 | 14:36:15 | 222959.9600 | 27.5000 | 27613.1740 | 275.0045 | 55.0002 | 5.0000 | 4971.4825 | 43161.4860 | 582.5204 |
| x | | 220006.8100 | 26.5000 | 27462.6870 | 262.0042 | 30.0001 | 33.0001 | 4089.5338 | 43549.0070 | 439.5121 |
| %RSD | | 1.157 | 21.142 | 1.631 | 15.598 | 51.370 | 64.816 | 19.528 | 1.168 | 23.174 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 473556.0700 | 30.0001 | 1595.1527 | 1182.5839 | 2762.9580 | 110.0007 | 113094.7500 | 780.0365 | 30.0001 |
| 2 | 14:34:15 | 480961.3900 | 25.0000 | 1312.6034 | 1187.5846 | 2745.4522 | 117.5008 | 113629.4500 | 770.0356 | 27.5000 |
| 3 | 14:34:55 | 483888.7700 | 25.0000 | 1150.0794 | 1080.0700 | 2865.4926 | 135.0011 | 115583.5500 | 697.5292 | 37.5001 |
| 4 | 14:35:35 | 478035.0000 | 15.0000 | 1027.5633 | 1235.0915 | 2735.4489 | 137.5011 | 114924.5300 | 837.5421 | 37.5001 |
| 5 | 14:36:15 | 486517.9200 | 17.5000 | 1672.6679 | 1225.0900 | 2782.9646 | 145.0013 | 116235.0200 | 692.5288 | 20.0000 |
| x | | 480591.8300 | 22.5000 | 1351.6133 | 1182.0840 | 2778.4632 | 129.0010 | 114693.4600 | 755.5344 | 30.5001 |
| %RSD | | 1.052 | 27.217 | 20.581 | 5.197 | 1.868 | 11.350 | 1.146 | 8.070 | 24.177 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 35.0001 | 2042.7503 | 872.5457 | 360.0078 | 45.0001 | 1015.8953 | 155.0014 | 135.8344 | 775138.2300 |
| 2 | 14:34:15 | 37.5001 | 1860.2076 | 1047.5658 | 350.0074 | 36.6667 | 968.3896 | 155.8348 | 170.0017 | 789244.5900 |
| 3 | 14:34:55 | 47.5001 | 2057.7540 | 1020.0624 | 355.0076 | 31.6667 | 1025.8965 | 162.5016 | 163.3349 | 787503.3500 |
| 4 | 14:35:35 | 55.0002 | 2027.7467 | 987.5585 | 437.5115 | 32.5001 | 1046.7324 | 147.5013 | 144.1679 | 791087.6600 |
| 5 | 14:36:15 | 50.0001 | 2202.7911 | 950.0542 | 402.5097 | 54.1668 | 948.3873 | 152.5014 | 155.8348 | 790316.9300 |
| x | | 45.0001 | 2038.2499 | 975.5573 | 381.0088 | 40.0001 | 1001.0602 | 154.6681 | 153.8348 | 786658.1500 |
| %RSD | | 18.840 | 5.973 | 6.985 | 9.936 | 23.799 | 4.108 | 3.525 | 9.037 | 0.836 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 12.5000 | 5.0000 | 10.0000 | 0.0000 | 5.0000 | 898867.0000 | 30.0001 | 5.0000 | 33.7501 |
| 2 | 14:34:15 | 22.5000 | 10.0000 | 7.5000 | 5.0000 | 5.0000 | 910184.7300 | 36.2501 | 7.5000 | 27.5000 |
| 3 | 14:34:55 | 20.0000 | 2.5000 | 7.5000 | 2.5000 | 12.5000 | 906843.1900 | 37.5001 | 5.0000 | 47.5001 |
| 4 | 14:35:35 | 25.0000 | 7.5000 | 5.0000 | 2.5000 | 7.5000 | 910916.0400 | 45.0001 | 5.0000 | 36.2501 |
| 5 | 14:36:15 | 2.5000 | 2.5000 | 17.5000 | 2.5000 | 2.5000 | 909436.8100 | 45.0001 | 2.5000 | 40.0001 |
| x | | 16.5000 | 5.5000 | 9.5000 | 2.5000 | 6.5000 | 907249.5500 | 38.7501 | 5.0000 | 37.0001 |
| %RSD | | 55.256 | 59.265 | 50.619 | 70.711 | 58.330 | 0.544 | 16.448 | 35.355 | 20.072 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 2.5000 | 20.0000 | 791564.9500 | 40.0001 | 10.0000 | 5.0000 | 10.0000 | 1264230.5000 | 23.7500 |
| 2 | 14:34:15 | 2.5000 | 22.5000 | 801712.1200 | 70.0003 | 15.0000 | 10.0000 | 5.0000 | 1275641.6000 | 22.5000 |
| 3 | 14:34:55 | 5.0000 | 15.0000 | 802187.2400 | 65.0003 | 17.5000 | 5.0000 | 10.0000 | 1272993.8000 | 13.7500 |
| 4 | 14:35:35 | 6.2500 | 27.5000 | 804637.4200 | 42.5001 | 25.0000 | 5.0000 | 15.0000 | 1274804.3000 | 28.7500 |
| 5 | 14:36:15 | 6.2500 | 27.5000 | 808935.1200 | 42.5001 | 12.5000 | 10.0000 | 12.5000 | 1287087.6000 | 35.0001 |
| x | | 4.5000 | 22.5000 | 801807.3700 | 52.0002 | 16.0000 | 7.0000 | 10.5000 | 1274951.6000 | 24.7500 |
| %RSD | | 42.127 | 23.570 | 0.798 | 27.492 | 35.971 | 39.123 | 35.315 | 0.640 | 31.822 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:33:34 | 48.7501 | 27.5000 | 37.5001 | 95.0005 | 905714.8100 | 2.5000 |
| 2 | 14:34:15 | 63.7502 | 30.0001 | 25.0000 | 70.0003 | 909839.9600 | 5.0000 |
| 3 | 14:34:55 | 60.0002 | 17.5000 | 22.5000 | 72.5003 | 906961.3200 | 2.5000 |
| 4 | 14:35:35 | 42.5001 | 22.5000 | 12.5000 | 67.5003 | 907233.7200 | 0.0000 |
| 5 | 14:36:15 | 50.0001 | 25.0000 | 47.5001 | 62.5002 | 913654.1100 | 0.0000 |
| x | | 53.0002 | 24.5000 | 29.0001 | 73.5003 | 908680.7800 | 2.0000 |
| %RSD | | 16.391 | 19.628 | 47.060 | 17.109 | 0.348 | 104.583 |

S 06/17/2015 14:37:16

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 218186.0700 | 658.3593 | 703540.2800 | 375069.8800 | 48551.0210 | 53068.4390 | 47477.3620 | 386146.4600 | 13503.4320 |
| 2 | 14:38:37 | 219457.1300 | 663.3597 | 725144.6100 | 379090.8300 | 48098.4080 | 53626.9980 | 48211.5590 | 404971.7000 | 14152.0070 |
| 3 | 14:39:18 | 221236.6000 | 680.0278 | 747269.4400 | 388745.7200 | 49863.7390 | 53818.2250 | 47060.0050 | 407768.2400 | 14492.5910 |
| 4 | 14:39:58 | 223849.1600 | 645.0250 | 757723.1100 | 395439.9100 | 49964.3380 | 54507.6840 | 48603.8280 | 409221.9600 | 14109.4340 |
| 5 | 14:40:38 | 222204.3400 | 614.1893 | 734481.5900 | 384416.6700 | 49325.5500 | 52333.8150 | 48749.6760 | 400285.7400 | 14086.8960 |
| X | | 220986.6600 | 652.1922 | 733631.8100 | 384552.6000 | 49160.6110 | 53471.0320 | 48020.4860 | 401678.8200 | 14068.8720 |
| %RSD | | 1.010 | 3.782 | 2.847 | 2.080 | 1.661 | 1.529 | 1.518 | 2.322 | 2.533 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 473750.4200 | 17.5000 | 16751.8210 | 6782.7592 | 17911.7290 | 4098.5076 | 373324.0400 | 7223.1291 | 3998.4590 |
| 2 | 14:38:37 | 479475.5800 | 25.0000 | 16298.4230 | 7133.0515 | 17851.6000 | 4010.9650 | 377582.1000 | 7175.5880 | 4091.0039 |
| 3 | 14:39:18 | 481617.7100 | 25.0000 | 16235.8010 | 7052.9834 | 17738.8600 | 4348.6343 | 384482.0900 | 7433.3138 | 3975.9483 |
| 4 | 14:39:58 | 487027.6900 | 20.0000 | 16057.9570 | 7055.4855 | 17819.0310 | 4101.0088 | 383786.0800 | 7673.5314 | 4311.1149 |
| 5 | 14:40:38 | 490512.1600 | 17.5000 | 16551.4210 | 7022.9581 | 17758.9030 | 4111.0138 | 380691.3700 | 7145.5622 | 4211.0637 |
| X | | 482476.7100 | 21.0000 | 16379.0840 | 7009.4476 | 17816.0250 | 4134.0259 | 379973.1400 | 7330.2249 | 4117.5180 |
| %RSD | | 1.356 | 18.054 | 1.669 | 1.899 | 0.393 | 3.062 | 1.215 | 3.035 | 3.459 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 940.0530 | 6209.8128 | 2970.5293 | 1405.1185 | 540.8509 | 1574.3154 | 390.0091 | 160.0015 | 783695.7800 |
| 2 | 14:38:37 | 970.0565 | 6387.4470 | 2960.5258 | 1390.1159 | 456.6792 | 1555.1451 | 375.0084 | 166.6683 | 783923.2500 |
| 3 | 14:39:18 | 1037.5646 | 6545.0693 | 3118.0832 | 1570.1479 | 487.5143 | 1644.3289 | 365.8414 | 165.8350 | 785962.5800 |
| 4 | 14:39:58 | 937.5527 | 6497.5321 | 3068.0647 | 1380.1143 | 512.5158 | 1609.3220 | 366.6747 | 153.3347 | 791474.4300 |
| 5 | 14:40:38 | 995.0594 | 6389.9489 | 3170.6030 | 1502.6355 | 484.1807 | 1580.1498 | 396.6761 | 158.3348 | 797116.0200 |
| X | | 976.0572 | 6405.9620 | 3057.5612 | 1449.6264 | 496.3482 | 1592.6522 | 378.8420 | 160.8349 | 788434.4100 |
| %RSD | | 4.273 | 2.017 | 2.995 | 5.739 | 6.404 | 2.186 | 3.673 | 3.437 | 0.733 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 17.5000 | 7.5000 | 7.5000 | 7.5000 | 2.5000 | 905539.7300 | 2667.9270 | 32.5001 | 2577.8987 |
| 2 | 14:38:37 | 15.0000 | 2.5000 | 2.5000 | 2.5000 | 5.0000 | 910726.9500 | 2829.2302 | 52.5002 | 2665.4262 |
| 3 | 14:39:18 | 27.5000 | 2.5000 | 20.0000 | 0.0000 | 15.0000 | 913307.8000 | 2851.7379 | 42.5001 | 2739.2001 |
| 4 | 14:39:58 | 17.5000 | 10.0000 | 12.5000 | 5.0000 | 2.5000 | 915377.4800 | 2796.7192 | 25.0000 | 2796.7192 |
| 5 | 14:40:38 | 17.5000 | 2.5000 | 10.0000 | 5.0000 | 10.0000 | 913552.5800 | 2745.4522 | 65.0003 | 2661.6750 |
| X | | 19.0000 | 5.0000 | 10.5000 | 4.0000 | 7.0000 | 911700.9100 | 2778.2133 | 43.5001 | 2688.1838 |
| %RSD | | 25.649 | 70.711 | 61.629 | 71.261 | 77.427 | 0.419 | 2.644 | 36.484 | 3.099 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 510.0156 | 1332.6065 | 798568.1700 | 50.0001 | 2770.4605 | 3163.1002 | 5311.6923 | 1274378.4000 | 2100.2646 |
| 2 | 14:38:37 | 593.7712 | 1205.0871 | 800295.1400 | 72.5003 | 2865.4926 | 3195.6126 | 5596.8789 | 1274676.8000 | 2184.0362 |
| 3 | 14:39:18 | 536.2672 | 1440.1244 | 805082.4800 | 62.5002 | 3018.0464 | 3018.0464 | 5599.3806 | 1282139.8000 | 2179.0349 |
| 4 | 14:39:58 | 548.7681 | 1282.5987 | 810268.2800 | 77.5004 | 2973.0302 | 3248.1329 | 5579.3671 | 1290589.8000 | 2265.3079 |
| 5 | 14:40:38 | 537.5173 | 1275.0975 | 807756.0600 | 80.0004 | 3055.5601 | 3155.5974 | 5384.2388 | 1293347.3000 | 2045.2510 |
| X | | 545.2679 | 1307.1029 | 804394.0300 | 68.5003 | 2936.5180 | 3156.0979 | 5494.3115 | 1283026.4000 | 2154.7789 |
| %RSD | | 5.614 | 6.667 | 0.612 | 17.991 | 3.985 | 2.704 | 2.480 | 0.685 | 3.926 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:37:57 | 5062.7874 | 1610.1555 | 1557.6456 | 3853.3907 | 909260.2600 | 5.0000 |
| 2 | 14:38:37 | 5195.3690 | 1637.6609 | 1595.1527 | 3875.9011 | 905920.4600 | 0.0000 |
| 3 | 14:39:18 | 5469.2942 | 1717.6770 | 1652.6639 | 3998.4590 | 913253.5600 | 10.0000 |
| 4 | 14:39:58 | 5305.4383 | 1825.1999 | 1720.1775 | 3973.4471 | 921610.3200 | 2.5000 |
| 5 | 14:40:38 | 5219.1338 | 1765.1869 | 1550.1442 | 3678.3116 | 913759.8100 | 2.5000 |
| X | | 5250.4046 | 1711.1760 | 1615.1568 | 3875.9019 | 912760.8800 | 4.0000 |
| %RSD | | 2.859 | 5.192 | 4.418 | 3.266 | 0.645 | 94.786 |

**S10** 06/17/2015 14:41:39

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 222440.5200 | 6346.5825 | 42362.4010 | 8108.9434 | 1055.0668 | 1080.0700 | 26166.0150 | 50346.6290 | 745.0333 |
| 2 | 14:43:00 | 225852.9900 | 6301.5483 | 42274.4560 | 8239.0709 | 1245.0930 | 1205.0871 | 26103.3190 | 51141.4470 | 750.0338 |
| 3 | 14:43:40 | 224391.8000 | 6297.3785 | 42462.9110 | 8404.2357 | 950.0542 | 1245.0930 | 26391.7250 | 51350.2250 | 792.5377 |
| 4 | 14:44:20 | 226727.9400 | 6335.7409 | 42465.4240 | 8534.3679 | 1015.0618 | 1160.0807 | 27472.7100 | 51204.3310 | 722.5313 |
| 5 | 14:45:00 | 226175.7300 | 6092.2261 | 41540.7810 | 7843.6897 | 980.0576 | 1230.0908 | 27843.9400 | 50744.0280 | 780.0365 |
| x | | 225117.8000 | 6274.6953 | 42221.1950 | 8226.0615 | 1049.0667 | 1184.0843 | 26795.5420 | 50957.3320 | 758.0345 |
| %RSD | | 0.768 | 1.661 | 0.920 | 3.256 | 11.094 | 5.614 | 3.007 | 0.802 | 3.713 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 487060.7900 | 27.5000 | 32144.3760 | 31391.5140 | 3770.8530 | 41003.1280 | 129610.1500 | 1077.5697 | 41543.2930 |
| 2 | 14:43:00 | 487944.0300 | 22.5000 | 32161.9440 | 31183.2350 | 3845.8872 | 41626.2050 | 128003.0900 | 1227.5904 | 41427.7200 |
| 3 | 14:43:40 | 494662.0000 | 22.5000 | 31936.0780 | 31815.6180 | 3925.9246 | 41513.1440 | 128673.3000 | 1180.0835 | 41927.7110 |
| 4 | 14:44:20 | 498534.0700 | 20.0000 | 31800.5610 | 31030.1650 | 3890.9081 | 40191.6890 | 129427.3400 | 1122.5756 | 41854.8460 |
| 5 | 14:45:00 | 495682.5400 | 32.5001 | 31785.5040 | 30420.4230 | 3818.3746 | 39548.6230 | 128295.0300 | 1097.5723 | 39963.0940 |
| x | | 492776.6900 | 25.0000 | 31965.6930 | 31168.1910 | 3850.3895 | 40776.5580 | 128801.7800 | 1141.0783 | 41343.3330 |
| %RSD | | 1.021 | 20.000 | 0.566 | 1.642 | 1.575 | 2.182 | 0.543 | 5.415 | 1.933 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 9650.5848 | 23944.3510 | 11410.3060 | 6635.1405 | 4795.5461 | 2205.2918 | 614.1893 | 141.6679 | 785227.9300 |
| 2 | 14:43:00 | 9265.1477 | 25060.1240 | 11628.1070 | 6857.8206 | 4822.2282 | 2186.9536 | 650.8588 | 155.8348 | 792009.3500 |
| 3 | 14:43:40 | 9412.8131 | 25004.9590 | 11908.5030 | 6980.4224 | 4945.6338 | 2160.2800 | 683.3614 | 158.3348 | 799405.5300 |
| 4 | 14:44:20 | 9312.7007 | 24563.6490 | 11480.4030 | 6782.7592 | 4728.0075 | 2192.7885 | 655.8591 | 156.6681 | 796951.3300 |
| 5 | 14:45:00 | 9152.5234 | 24124.8700 | 11099.8880 | 6414.9682 | 4675.4779 | 2168.6155 | 645.8584 | 170.0017 | 802514.0700 |
| x | | 9358.7539 | 24539.5900 | 11505.4410 | 6734.2222 | 4793.3787 | 2182.7859 | 650.0254 | 156.5015 | 795221.6400 |
| %RSD | | 2.010 | 2.052 | 2.577 | 3.236 | 2.143 | 0.836 | 3.805 | 6.438 | 0.853 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 20.0000 | 5.0000 | 15.0000 | 0.0000 | 10.0000 | 905951.0300 | 26392.9790 | 387.5090 | 25175.4710 |
| 2 | 14:43:00 | 25.0000 | 2.5000 | 12.5000 | 7.5000 | 5.0000 | 914784.9000 | 26330.2810 | 392.5092 | 26204.8870 |
| 3 | 14:43:40 | 32.5001 | 10.0000 | 17.5000 | 12.5000 | 5.0000 | 923808.6700 | 27496.5390 | 395.0094 | 26302.6940 |
| 4 | 14:44:20 | 30.0001 | 12.5000 | 7.5000 | 7.5000 | 22.5000 | 918975.5400 | 27832.6520 | 377.5086 | 26808.0510 |
| 5 | 14:45:00 | 17.5000 | 15.0000 | 10.0000 | 7.5000 | 7.5000 | 922675.3200 | 26112.0960 | 352.5075 | 25268.2510 |
| x | | 25.0000 | 9.0000 | 12.5000 | 7.0000 | 10.0000 | 917239.0900 | 26832.9100 | 381.0087 | 25951.8710 |
| %RSD | | 25.495 | 57.601 | 31.623 | 63.888 | 72.887 | 0.788 | 2.890 | 4.537 | 2.718 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 5625.6482 | 13112.8090 | 789927.4700 | 100.0006 | 15031.0440 | 3235.6280 | 5454.2844 | 1277359.9000 | 21250.8110 |
| 2 | 14:43:00 | 5539.3404 | 13095.2810 | 811986.5700 | 65.0003 | 15000.9900 | 3273.1427 | 5619.3940 | 1292952.5000 | 21878.6830 |
| 3 | 14:43:40 | 5661.9228 | 13313.1260 | 812717.9700 | 115.0008 | 15346.6180 | 3180.6069 | 5694.4449 | 1303813.1000 | 22445.1870 |
| 4 | 14:44:20 | 5609.3873 | 12634.5710 | 813936.2000 | 82.5004 | 15053.5840 | 3228.1251 | 5469.2942 | 1311611.6000 | 22497.8280 |
| 5 | 14:45:00 | 5420.5123 | 12481.8410 | 823685.3900 | 125.0009 | 14820.6670 | 3135.5898 | 5569.3604 | 1320205.9000 | 21447.5640 |
| x | | 5571.3622 | 12927.5250 | 810450.7200 | 97.5006 | 15050.5810 | 3210.6185 | 5561.3556 | 1301188.6000 | 21904.0150 |
| %RSD | | 1.712 | 2.723 | 1.531 | 24.860 | 1.258 | 1.661 | 1.822 | 1.282 | 2.584 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:42:19 | 52020.6130 | 18460.4250 | 15126.2160 | 37808.0730 | 911039.7800 | 0.0000 |
| 2 | 14:43:00 | 53103.6630 | 18380.2480 | 15309.0490 | 37782.9590 | 923478.6700 | 2.5000 |
| 3 | 14:43:40 | 53774.1920 | 18270.0060 | 15529.4560 | 38591.6530 | 926291.6900 | 2.5000 |
| 4 | 14:44:20 | 52992.9610 | 18550.6250 | 15464.3350 | 38752.3960 | 935728.8200 | 2.5000 |
| 5 | 14:45:00 | 51250.8660 | 17869.1380 | 15183.8200 | 37489.1370 | 937063.2700 | 0.0000 |
| x | | 52628.4590 | 18306.0880 | 15322.5750 | 38084.8440 | 926720.4500 | 1.5000 |
| %RSD | | 1.885 | 1.449 | 1.135 | 1.453 | 1.138 | 91.287 |

**S50** 06/17/2015 14:46:02

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 224046.0100 | 31370.6030 | 95939.0980 | 39207.0150 | 5491.8090 | 5456.7860 | 118062.9500 | 77291.7870 | 1945.2270 |
| 2 | 14:47:23 | 224332.7400 | 31625.7310 | 94968.0700 | 38890.5370 | 5096.5580 | 5797.0156 | 118996.0800 | 77496.1720 | 1852.7059 |
| 3 | 14:48:04 | 227877.8400 | 31834.0220 | 96930.4710 | 40246.9550 | 5246.6511 | 5701.9501 | 120946.3600 | 78972.4340 | 1947.7276 |
| 4 | 14:48:44 | 227996.8600 | 31759.5720 | 97542.5510 | 40603.6790 | 5106.5641 | 5616.8923 | 121334.4400 | 78987.5760 | 1910.2189 |
| 5 | 14:49:24 | 228862.6200 | 31009.2540 | 94748.0870 | 38830.2570 | 4801.3828 | 5321.6987 | 118580.2200 | 76787.1540 | 1927.7229 |
| X | | 226623.2100 | 31519.8360 | 96025.6560 | 39555.6890 | 5148.5930 | 5578.8685 | 119584.0100 | 77907.0240 | 1916.7205 |
| %RSD | | 0.996 | 1.065 | 1.262 | 2.064 | 4.879 | 3.415 | 1.225 | 1.300 | 2.027 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 491165.2400 | 32.5001 | 158006.3900 | 151420.8100 | 8409.2408 | 204319.4500 | 182052.0900 | 2445.3587 | 208549.8300 |
| 2 | 14:47:23 | 487691.1000 | 35.0001 | 156620.6000 | 152841.3900 | 8366.6980 | 205121.2900 | 181510.4700 | 2387.8421 | 207973.1900 |
| 3 | 14:48:04 | 496186.2300 | 30.0001 | 159840.8800 | 154514.3200 | 8356.6880 | 208875.3300 | 183298.9800 | 2490.3721 | 209513.5600 |
| 4 | 14:48:44 | 493430.8800 | 30.0001 | 157802.5900 | 154055.9500 | 8306.6380 | 205275.0100 | 182207.9400 | 2552.8910 | 208982.9800 |
| 5 | 14:49:24 | 492520.5800 | 15.0000 | 153243.6800 | 150397.5300 | 7996.3346 | 199497.2000 | 180876.9100 | 2440.3573 | 203830.1900 |
| X | | 492198.8100 | 28.5001 | 157102.8300 | 152646.0000 | 8287.1199 | 204617.6600 | 181989.2800 | 2463.3642 | 207769.9500 |
| %RSD | | 0.634 | 27.461 | 1.557 | 1.138 | 2.010 | 1.641 | 0.494 | 2.511 | 1.094 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 47049.9480 | 113986.7800 | 53216.8810 | 31677.5940 | 23656.0290 | 7099.6897 | 2645.4198 | 165.8350 | 780865.1600 |
| 2 | 14:47:23 | 47366.7350 | 114562.0900 | 53808.1600 | 32239.7440 | 23700.3210 | 7127.2132 | 2671.2614 | 162.5016 | 797821.4800 |
| 3 | 14:48:04 | 48659.1490 | 116516.4100 | 55632.5810 | 32488.2060 | 24130.7200 | 7425.8071 | 2647.9206 | 130.8344 | 792028.5500 |
| 4 | 14:48:44 | 48110.9800 | 114848.4900 | 54693.8980 | 32372.7580 | 23754.6420 | 7187.2647 | 2633.7495 | 148.3347 | 801313.9100 |
| 5 | 14:49:24 | 47323.9930 | 112980.7200 | 53138.8860 | 30834.4400 | 23681.9360 | 7018.7879 | 2606.2408 | 155.8348 | 797854.4200 |
| X | | 47702.1610 | 114578.9000 | 54098.0810 | 31922.5480 | 23784.7300 | 7171.7525 | 2640.9184 | 152.6681 | 793976.7000 |
| %RSD | | 1.392 | 1.132 | 1.959 | 2.140 | 0.827 | 2.153 | 0.897 | 9.121 | 1.014 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 52.5002 | 15.0000 | 45.0001 | 0.0000 | 30.0001 | 907902.2300 | 131875.2700 | 1985.2364 | 127966.2900 |
| 2 | 14:47:23 | 45.0001 | 25.0000 | 15.0000 | 12.5000 | 32.5001 | 915750.3000 | 134152.4400 | 1910.2189 | 128859.9000 |
| 3 | 14:48:04 | 80.0004 | 15.0000 | 32.5001 | 5.0000 | 22.5000 | 923655.5000 | 135963.9500 | 1867.7093 | 131840.9900 |
| 4 | 14:48:44 | 50.0001 | 20.0000 | 37.5001 | 10.0000 | 35.0001 | 921814.9600 | 137120.1600 | 1835.2021 | 133019.5000 |
| 5 | 14:49:24 | 67.5003 | 22.5000 | 30.0001 | 17.5000 | 50.0001 | 922001.5000 | 131167.9900 | 1925.2224 | 125900.1700 |
| X | | 59.0002 | 19.5000 | 32.0001 | 9.0000 | 34.0001 | 918224.9000 | 134055.9600 | 1904.7178 | 129517.3700 |
| %RSD | | 24.452 | 22.934 | 34.676 | 75.051 | 29.686 | 0.709 | 1.907 | 3.009 | 2.237 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 27728.5560 | 66058.2880 | 806706.3200 | 87.5005 | 75813.2980 | 15822.5070 | 27339.7740 | 1294328.6000 | 108751.2600 |
| 2 | 14:47:23 | 28060.9150 | 65642.5220 | 811835.3400 | 85.0004 | 76078.1960 | 15990.3270 | 27688.4230 | 1298960.7000 | 109840.4100 |
| 3 | 14:48:04 | 28519.9700 | 65912.1380 | 815707.4700 | 115.0008 | 75475.2500 | 16070.4810 | 28227.7270 | 1303031.3000 | 111405.9800 |
| 4 | 14:48:44 | 28096.0340 | 66383.3560 | 825048.3400 | 112.5008 | 75568.5900 | 15727.3270 | 28461.0190 | 1315565.7000 | 111630.2000 |
| 5 | 14:49:24 | 27466.4400 | 63878.8960 | 818370.5600 | 85.0004 | 73792.7820 | 15531.9610 | 27141.6280 | 1307659.2000 | 107652.1300 |
| X | | 27974.3830 | 65575.0400 | 815533.6100 | 97.0006 | 75345.6230 | 15828.5200 | 27771.7140 | 1303909.1000 | 109856.0000 |
| %RSD | | 1.428 | 1.502 | 0.846 | 15.825 | 1.193 | 1.351 | 2.032 | 0.627 | 1.552 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:46:43 | 261110.1100 | 90314.2620 | 77526.4510 | 190328.9700 | 916562.7600 | 2.5000 |
| 2 | 14:47:23 | 264330.5400 | 91636.0750 | 76650.9080 | 191630.8000 | 923072.1100 | 0.0000 |
| 3 | 14:48:04 | 267396.0500 | 90862.6760 | 76749.3070 | 191354.5600 | 930133.8800 | 2.5000 |
| 4 | 14:48:44 | 269335.7900 | 91729.5960 | 76761.9230 | 192564.4500 | 930685.6900 | 0.0000 |
| 5 | 14:49:24 | 257576.4000 | 89394.4240 | 75336.5030 | 184673.8400 | 934798.8700 | 0.0000 |
| X | | 263949.7800 | 90787.4070 | 76605.0180 | 190110.5200 | 927050.6600 | 1.0000 |
| %RSD | | 1.794 | 1.070 | 1.033 | 1.653 | 0.779 | 136.931 |

**S200** 06/17/2015 14:50:26

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 226670.5800 | 127416.7100 | 314790.3600 | 158482.8100 | 20926.2420 | 21878.6830 | 462294.3900 | 183978.7200 | 6039.6879 |
| 2 | 14:51:46 | 229058.7300 | 129113.3600 | 324276.4000 | 162239.0700 | 20825.9910 | 22269.7170 | 471827.0200 | 185954.3500 | 6082.2188 |
| 3 | 14:52:27 | 226781.0200 | 129665.1600 | 327218.1000 | 163375.9600 | 20871.1030 | 22410.0920 | 470441.9100 | 185921.1200 | 6169.7831 |
| 4 | 14:53:07 | 229048.4500 | 128644.5300 | 330124.4200 | 161041.1600 | 20435.0250 | 22259.6900 | 468578.7100 | 188674.4700 | 5842.0471 |
| 5 | 14:53:47 | 229322.5000 | 126758.4500 | 316194.5500 | 156235.9800 | 19562.9360 | 22369.9850 | 460557.0400 | 181086.3900 | 5817.0296 |
| X | | 228176.2600 | 128319.6400 | 322520.7700 | 160275.0000 | 20524.2590 | 22237.6330 | 466739.8100 | 185123.0100 | 5990.1533 |
| %RSD | | 0.583 | 0.938 | 2.096 | 1.808 | 2.783 | 0.948 | 1.076 | 1.517 | 2.574 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 479081.3500 | 35.0001 | 623369.7900 | 605174.2200 | 24222.6530 | 825040.0800 | 380798.6100 | 7478.3540 | 841994.1200 |
| 2 | 14:51:46 | 483238.8900 | 35.0001 | 632578.9200 | 607365.3300 | 24864.5390 | 830584.9100 | 376941.5500 | 7253.1551 | 839246.6100 |
| 3 | 14:52:27 | 485636.1500 | 20.0000 | 635116.4500 | 620991.7100 | 24776.7790 | 837459.5400 | 383775.6200 | 7578.4444 | 858419.9300 |
| 4 | 14:53:07 | 486389.4900 | 27.5000 | 632508.8900 | 607209.5700 | 25102.7520 | 828750.0200 | 377328.4900 | 7600.9649 | 840060.2900 |
| 5 | 14:53:47 | 488267.1600 | 47.5001 | 620763.0800 | 599261.5200 | 24170.0010 | 814670.5200 | 372851.0600 | 7555.9240 | 815514.9300 |
| X | | 484522.6100 | 33.0001 | 628867.4200 | 608000.4700 | 24627.3450 | 827301.0100 | 378339.0600 | 7493.3685 | 839047.1800 |
| %RSD | | 0.730 | 30.959 | 1.012 | 1.311 | 1.671 | 1.013 | 1.095 | 1.895 | 1.826 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 189075.9200 | 453925.1000 | 213646.5300 | 124977.6900 | 94534.0100 | 25371.8990 | 10054.3950 | 148.3347 | 771141.7400 |
| 2 | 14:51:46 | 191751.0100 | 456476.4500 | 212682.3300 | 126289.7500 | 94947.8420 | 25543.2540 | 10086.1000 | 141.6679 | 773126.0700 |
| 3 | 14:52:27 | 192280.5100 | 463424.6400 | 219480.2300 | 128284.8800 | 95141.7000 | 25507.3110 | 10222.0990 | 141.6679 | 779413.2100 |
| 4 | 14:53:07 | 189472.2700 | 451569.6600 | 213723.4600 | 127485.2500 | 94749.7730 | 25385.2730 | 9800.7599 | 153.3347 | 768739.2500 |
| 5 | 14:53:47 | 185151.7700 | 444256.9000 | 207588.7800 | 120806.8600 | 92311.8050 | 24836.9570 | 9744.0268 | 129.1677 | 766961.0700 |
| X | | 189546.3000 | 453930.5500 | 213424.2700 | 125568.8800 | 94337.0260 | 25328.9390 | 9981.4762 | 142.8346 | 771876.2700 |
| %RSD | | 1.489 | 1.541 | 1.980 | 2.342 | 1.224 | 1.125 | 2.024 | 6.359 | 0.624 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 85.0004 | 10.0000 | 40.0001 | 5.0000 | 52.5002 | 897795.1700 | 535533.3000 | 7258.1595 | 511670.5200 |
| 2 | 14:51:46 | 52.5002 | 17.5000 | 62.5002 | 30.0001 | 32.5001 | 897750.7500 | 542615.1100 | 7628.4900 | 523570.3500 |
| 3 | 14:52:27 | 80.0004 | 20.0000 | 72.5003 | 10.0000 | 42.5001 | 899683.4600 | 549378.6400 | 7280.6791 | 530636.9900 |
| 4 | 14:53:07 | 65.0003 | 17.5000 | 52.5002 | 12.5000 | 27.5000 | 885558.9300 | 550960.6300 | 7453.3316 | 532803.9100 |
| 5 | 14:53:47 | 70.0003 | 17.5000 | 62.5002 | 22.5000 | 27.5000 | 887935.4800 | 519669.7000 | 7318.2120 | 501854.7700 |
| X | | 70.5003 | 16.5000 | 58.0002 | 16.0000 | 36.5001 | 893744.7600 | 539631.4700 | 7387.7744 | 520107.3100 |
| %RSD | | 18.151 | 22.978 | 21.204 | 63.083 | 29.698 | 0.726 | 2.358 | 2.090 | 2.522 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 110626.9600 | 259178.7000 | 790629.6000 | 157.5015 | 295484.9200 | 62810.8230 | 111404.7200 | 1277383.1000 | 440484.3300 |
| 2 | 14:51:46 | 112832.4800 | 262987.7900 | 796380.4300 | 165.0016 | 300644.6400 | 64110.6660 | 111878.5000 | 1270697.2000 | 446005.4300 |
| 3 | 14:52:27 | 112183.8100 | 264450.5100 | 796462.7700 | 190.0022 | 304148.4000 | 64012.4150 | 111840.5000 | 1286260.8000 | 450516.1200 |
| 4 | 14:53:07 | 110763.7600 | 260651.0700 | 788775.6500 | 185.0021 | 296476.7300 | 62878.8330 | 111194.4400 | 1279878.5000 | 451548.5600 |
| 5 | 14:53:47 | 107557.1600 | 254077.6700 | 792393.4100 | 152.5014 | 291254.8500 | 60904.2490 | 106691.1400 | 1262673.8000 | 433303.4100 |
| X | | 110792.8300 | 260269.1500 | 792928.3700 | 170.0018 | 297601.9100 | 62943.3970 | 110601.8600 | 1275378.7000 | 444371.5700 |
| %RSD | | 1.838 | 1.543 | 0.433 | 9.810 | 1.664 | 2.054 | 1.994 | 0.708 | 1.705 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:51:06 | 1072634.8000 | 366145.8500 | 306637.1600 | 766490.6000 | 921196.8900 | 0.0000 |
| 2 | 14:51:46 | 1084322.3000 | 363464.7300 | 309157.7700 | 775108.1100 | 918034.8400 | 7.5000 |
| 3 | 14:52:27 | 1100933.4000 | 369021.1100 | 311881.5000 | 785773.4300 | 922419.1500 | 0.0000 |
| 4 | 14:53:07 | 1093454.2000 | 368295.0200 | 311679.1300 | 774379.8500 | 920801.5700 | 0.0000 |
| 5 | 14:53:47 | 1053665.6000 | 355796.7200 | 301180.9900 | 758947.3500 | 923389.5600 | 0.0000 |
| X | | 1081002.0000 | 364544.6900 | 308107.3100 | 772139.8700 | 921168.4000 | 1.5000 |
| %RSD | | 1.719 | 1.467 | 1.435 | 1.304 | 0.220 | 223.607 |

**S500** 06/17/2015 14:54:49

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 225182.7100 | 315692.7200 | 745866.7400 | 387175.0700 | 48797.4540 | 52640.7390 | 1147098.7000 | 385989.4300 | 13490.9110 |
| 2 | 14:56:15 | 227346.9600 | 320334.0600 | 757288.6600 | 394868.7600 | 50100.1500 | 55388.4630 | 1161925.0000 | 391034.1400 | 14086.8960 |
| 3 | 14:56:55 | 228393.3300 | 321104.5500 | T786501.7400 | 398584.5400 | 50100.1500 | 54542.9140 | 1167041.4000 | 394714.1900 | 14079.3840 |
| 4 | 14:57:35 | 228100.4700 | 320854.3500 | 775261.4400 | 393239.3600 | 49863.7390 | 54804.6220 | T1152913.6000 | 396569.2200 | 14334.8190 |
| 5 | 14:58:15 | 231867.3200 | 317686.3800 | 750777.1800 | 392652.6500 | 49919.0680 | 53199.2690 | 1138868.8000 | 382177.1100 | 13738.8160 |
| x | | 228178.1600 | 319134.4100 | T763139.1500 | 393304.0800 | 49756.1120 | 54115.2020 | T1153569.5000 | 390096.8200 | 13946.1650 |
| %RSD | | 1.058 | 0.739 | T2.249 | 1.051 | 1.098 | 2.126 | T0.979 | 1.536 | 2.375 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 474248.8500 | 35.0001 | 1559639.6000 | 1506323.7000 | 56201.3790 | T2044264.4000 | 769951.3600 | 16791.9010 | T2093086.7000 |
| 2 | 14:56:15 | 473448.9900 | 27.5000 | 1586050.7000 | 1533382.3000 | 56372.5290 | T2072207.3000 | 772252.9100 | 16934.6900 | T2112794.7000 |
| 3 | 14:56:55 | 474099.4500 | 60.0002 | 1598301.6000 | 1551182.4000 | 57110.0250 | T2083716.4000 | 773262.9300 | 17307.9550 | T2132619.8000 |
| 4 | 14:57:35 | 478230.7700 | 32.5001 | T1580999.2000 | 1537598.7000 | 55811.2700 | T2088348.0000 | 768151.0400 | 17245.3260 | T2103548.8000 |
| 5 | 14:58:15 | 478304.8400 | 20.0000 | 1567987.9000 | 1504305.8000 | 55743.3180 | T2024998.8000 | 765161.3800 | 17290.4190 | T2090698.3000 |
| x | | 475666.5800 | 35.0001 | T1578595.8000 | 1526558.6000 | 56247.7040 | T2062707.0000 | 769755.9200 | 17114.0580 | T2106549.7000 |
| %RSD | | 0.503 | 43.154 | T0.962 | 1.342 | 0.976 | T1.317 | 0.422 | 1.376 | T0.808 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 462159.7200 | 1119717.8000 | 518602.4400 | 307026.1000 | 228186.1100 | 59046.7860 | 23985.3010 | 147.5013 | 754458.4100 |
| 2 | 14:56:15 | 470872.7500 | 1128488.7000 | 529999.5300 | 311253.6700 | 232133.7500 | M60299.0390 | 24124.8700 | 148.3347 | 755480.0300 |
| 3 | 14:56:55 | 473881.3000 | 1145728.0000 | 535521.3100 | 313004.9600 | 234679.4200 | M60977.2800 | M24587.0510 | 155.8348 | 756223.1100 |
| 4 | 14:57:35 | 466842.7300 | 1145482.4000 | 530923.1300 | 311793.2900 | 233051.3400 | M61272.7690 | M24393.1490 | 118.3342 | 756887.0100 |
| 5 | 14:58:15 | 460736.5700 | 1114671.2000 | 523619.5600 | 304301.3400 | 229935.7200 | 59501.6710 | 24081.4110 | 158.3348 | 758589.3500 |
| x | | 466898.6100 | 1130817.6000 | 527733.2000 | 309475.8700 | 231597.2700 | M60219.5090 | M24234.3570 | 145.6680 | 756327.5800 |
| %RSD | | 1.197 | 1.271 | 1.258 | 1.185 | 1.107 | M1.571 | M1.025 | 10.970 | 0.205 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 97.5006 | 27.5000 | 85.0004 | 35.0001 | 72.5003 | 881838.7200 | 1273261.8000 | 17921.7510 | 1227312.7000 |
| 2 | 14:56:15 | 132.5011 | 17.5000 | 90.0005 | 25.0000 | 65.0003 | 878169.9500 | M1300844.7000 | 18272.5110 | M1252987.0000 |
| 3 | 14:56:55 | 132.5011 | 40.0001 | 105.0007 | 22.5000 | 55.0002 | 873314.8000 | M1302293.2000 | 18016.9560 | M1261428.4000 |
| 4 | 14:57:35 | 90.0005 | 25.0000 | 110.0007 | 20.0000 | 62.5002 | 877632.5100 | M1328141.0000 | 18024.4720 | M1280317.7000 |
| 5 | 14:58:15 | 127.5010 | 35.0001 | 92.5005 | 42.5001 | 55.0002 | 880051.2500 | 1254435.0000 | 17761.4080 | 1213823.3000 |
| x | | 116.0008 | 29.0001 | 96.5006 | 29.0001 | 62.0002 | 878201.4500 | M1291795.1000 | 17999.4190 | M1247173.8000 |
| %RSD | | 17.746 | 30.234 | 10.930 | 32.599 | 11.893 | 0.364 | M2.207 | 1.033 | M2.137 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 269362.8900 | 631622.8200 | 771943.6300 | 140.0012 | 736582.9700 | 153696.9100 | 270272.9100 | 1254478.4000 | 1097591.3000 |
| 2 | 14:56:15 | 276355.0900 | 645867.4600 | 775891.2000 | 107.5007 | 741223.6200 | 155390.3900 | 273508.4400 | 1247101.9000 | 1125780.2000 |
| 3 | 14:56:55 | 274696.5800 | 649045.7100 | 777098.8200 | 110.0007 | 750321.2300 | 156363.3300 | 273647.9100 | 1245600.2000 | 1128931.9000 |
| 4 | 14:57:35 | 275793.1700 | 651903.9000 | 780402.1500 | 90.0005 | 742671.9400 | 154124.7100 | 273578.1800 | 1243431.9000 | 1129536.1000 |
| 5 | 14:58:15 | 270635.6500 | 634615.3500 | 776277.2900 | 95.0005 | 738526.7200 | 151293.5300 | 267335.4000 | 1248491.2000 | 1086358.7000 |
| x | | 273368.6800 | 642611.0500 | 776322.6200 | 108.5007 | 741865.2900 | 154173.7700 | 271668.5700 | 1247820.7000 | 1113639.6000 |
| %RSD | | 1.158 | 1.398 | 0.390 | 17.967 | 0.712 | 1.248 | 1.036 | 0.334 | 1.816 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:55:29 | 2735944.2000 | 901363.8200 | 761978.6300 | 1937154.5000 | 901805.4900 | 2.5000 |
| 2 | 14:56:15 | T2736666.7000 | 912698.6700 | 771478.3600 | 1953335.0000 | 903889.1300 | 0.0000 |
| 3 | 14:56:55 | 2812712.3000 | 918961.6300 | 777493.1800 | 1978581.5000 | 901076.3300 | 7.5000 |
| 4 | 14:57:35 | T2748375.5000 | 920055.5300 | 773257.4600 | 1970193.8000 | 910601.8200 | 0.0000 |
| 5 | 14:58:15 | 2725727.5000 | 902433.3100 | 758868.1000 | 1939061.0000 | 909062.8700 | 2.5000 |
| x | | T2751885.2000 | 911102.5900 | 768615.1500 | 1955665.2000 | 905287.1300 | 2.5000 |
| %RSD | | T1.270 | 0.973 | 1.024 | 0.943 | 0.476 | 122.475 |

**S2500** 06/17/2015 14:59:17

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | 218757.4200 | ↹1476482.3000 | ↹3470663.8000 | ↹1833912.3000 | 226984.7900 | 249778.0700 | ↹5254831.7000 | ↹1562812.4000 | 61314.7430 |
| 2 | 15:00:37 | 217517.2500 | ↹1502132.1000 | ↹3550817.8000 | ↹1870592.5000 | 234236.3800 | 247326.5600 | ↹5197263.0000 | ↹1592932.4000 | 62689.9180 |
| 3 | 15:01:18 | 217430.8800 | ↹1492811.1000 | ↹3529386.3000 | ↹1905778.9000 | 232015.5300 | 249103.3200 | ↹5279679.6000 | ↹1598414.4000 | 62725.1820 |
| 4 | 15:01:58 | 216826.2600 | ↹1483569.5000 | ↹3557413.8000 | ↹1870070.8000 | 230720.3000 | 248490.4200 | ↹5214945.9000 | ↹1598176.1000 | 60884.1030 |
| 5 | 15:02:38 | 215840.3200 | ↹1437033.9000 | ↹3391399.0000 | ↹1813663.6000 | 227837.6000 | 243372.6700 | ↹5124954.4000 | ↹1551208.5000 | 60851.3650 |
| x | | 217274.4300 | ↹1478405.8000 | ↹3499936.1000 | ↹1858803.6000 | 230358.9200 | 247614.2100 | ↹5214334.9000 | ↹1580708.8000 | 61693.0620 |
| %RSD | | 0.490 | ↹1.695 | ↹1.990 | ↹1.927 | 1.296 | 1.024 | ↹1.142 | ↹1.400 | 1.530 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | 440708.2200 | 55.0002 | ↹7173238.2000 | ↹6945783.5000 | 250599.7000 | ↹9490873.9000 | ↹3153125.0000 | 75974.7580 | ↹9648484.2000 |
| 2 | 15:00:37 | 440591.0100 | 32.5001 | ↹7276043.2000 | ↹6979340.9000 | 251892.8200 | ↹9491976.0000 | ↹3161369.4000 | 76194.2490 | ↹9689218.9000 |
| 3 | 15:01:18 | 442479.7400 | 15.0000 | ↹7315006.9000 | ↹7087052.3000 | 251944.3400 | ↹9611685.2000 | ↹3203765.3000 | 77650.0950 | ↹9791377.8000 |
| 4 | 15:01:58 | 442374.3600 | 20.0000 | ↹7237619.8000 | ↹6992354.7000 | 249090.4400 | ↹9453598.2000 | ↹3154644.1000 | 75941.9610 | ↹9710567.9000 |
| 5 | 15:02:38 | 439983.9100 | 30.0001 | ↹7157702.8000 | ↹6874194.2000 | 244144.7700 | ↹9349680.9000 | ↹3126071.7000 | 75656.8860 | ↹9485604.2000 |
| x | | 441227.4500 | 30.5001 | ↹7231922.2000 | ↹6975745.1000 | 249534.4100 | ↹9479562.8000 | ↹3159795.1000 | 76283.5900 | ↹9665050.6000 |
| %RSD | | 0.256 | 50.661 | ↹0.923 | ↹1.108 | 1.295 | ↹0.991 | ↹0.887 | 1.032 | ↹1.169 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | ↹2121067.8000 | ↹5116232.1000 | ↹2411486.0000 | 1424052.6000 | 1066218.1000 | 829.2079 | 158.3348 | 136.6678 | 703198.1300 |
| 2 | 15:00:37 | ↹2130853.7000 | ↹5107658.7000 | ↹2392520.8000 | 1430900.4000 | 1069227.0000 | 812.5396 | 155.8348 | 125.0009 | 695028.5900 |
| 3 | 15:01:18 | ↹2147421.1000 | ↹5144820.1000 | ↹2428569.8000 | 1435125.5000 | 1079638.2000 | 775.0360 | 156.6681 | 135.0011 | 697299.5500 |
| 4 | 15:01:58 | ↹2133464.2000 | ↹5118994.3000 | ↹2400934.7000 | 1432454.0000 | 1073779.5000 | 837.5421 | 147.5013 | 127.5010 | 700618.8800 |
| 5 | 15:02:38 | ↹2100139.8000 | ↹5008974.1000 | ↹2351068.3000 | 1410063.6000 | 1052842.7000 | 818.3735 | 164.1683 | 115.0008 | 694141.5300 |
| x | | ↹2126589.3000 | ↹5099335.8000 | ↹2396915.9000 | 1426519.2000 | 1068341.1000 | 814.5398 | 156.5015 | 127.8343 | 698057.3400 |
| %RSD | | ↹0.824 | ↹1.027 | ↹1.208 | 0.706 | 0.939 | 2.959 | 3.829 | 6.800 | 0.546 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | 262.5041 | 92.5005 | 112.5008 | 52.5002 | 142.5012 | 810683.3900 | 1435.1236 | 81966.1340 | 1502.6355 |
| 2 | 15:00:37 | 255.0039 | 97.5006 | 115.0008 | 57.5002 | 210.0027 | 807761.5600 | 1536.3916 | 82021.6770 | 1495.1341 |
| 3 | 15:01:18 | 160.0015 | 100.0006 | 145.0013 | 55.0002 | 210.0027 | 812539.2400 | 2441.6076 | 81900.4930 | 2345.3300 |
| 4 | 15:01:58 | 165.0016 | 72.5003 | 137.5011 | 60.0002 | 212.5027 | 806983.8500 | 3330.6655 | 82594.7960 | 3138.0907 |
| 5 | 15:02:38 | 137.5011 | 90.0005 | 102.5006 | 75.0003 | 177.5019 | 802494.8500 | 1440.1244 | 81435.9740 | 1468.8794 |
| x | | 196.0025 | 90.5005 | 122.5009 | 60.0002 | 190.5022 | 808092.5800 | 2036.7825 | 81983.8150 | 1990.0140 |
| %RSD | | 29.731 | 11.946 | 14.646 | 14.731 | 16.003 | 0.476 | 41.124 | 0.504 | 37.253 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | 1264328.8000 | ↹2954405.7000 | 722422.7600 | 82.5004 | ↹3524645.0000 | 709217.5700 | 1271965.6000 | 1174601.3000 | ↹5215934.5000 |
| 2 | 15:00:37 | 1273028.6000 | ↹2958631.0000 | 716595.4300 | 52.5002 | ↹3545809.3000 | 709934.9600 | 1265150.7000 | 1166918.3000 | ↹5261085.9000 |
| 3 | 15:01:18 | 1285132.5000 | ↹3004056.1000 | 722172.4000 | 92.5005 | ↹3578804.9000 | 718784.9800 | 1289574.1000 | 1180960.5000 | ↹5307806.4000 |
| 4 | 15:01:58 | 1273038.7000 | ↹2980076.0000 | 720341.1200 | 90.0005 | ↹3548211.0000 | 712419.1300 | 1270824.6000 | 1174635.7000 | ↹5301104.2000 |
| 5 | 15:02:38 | 1251362.9000 | ↹2920540.2000 | 721266.2400 | 82.5004 | ↹3470356.2000 | 699875.1100 | 1253013.0000 | 1182643.5000 | ↹5120489.9000 |
| x | | 1269378.3000 | ↹2963541.8000 | 720559.5900 | 80.0004 | ↹3533565.3000 | 710046.3500 | 1270105.6000 | 1175951.9000 | ↹5241284.2000 |
| %RSD | | 0.985 | ↹1.050 | 0.328 | 20.010 | ↹1.140 | 0.961 | 1.041 | 0.529 | ↹1.466 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 14:59:57 | ↹12678453.0000 | ↹4153493.8000 | ↹3764422.3000 | ↹9207585.9000 | 850672.6500 | 5.0000 |
| 2 | 15:00:37 | ↹12870031.0000 | ↹4189496.1000 | ↹3782658.2000 | ↹9278348.0000 | 851856.1300 | 0.0000 |
| 3 | 15:01:18 | ↹12905849.0000 | ↹4215083.6000 | ↹3834103.1000 | ↹9377591.7000 | 841976.1900 | 2.5000 |
| 4 | 15:01:58 | ↹12873524.0000 | ↹4198642.0000 | ↹3787084.9000 | ↹9310347.0000 | 853583.9800 | 5.0000 |
| 5 | 15:02:38 | ↹12535406.0000 | ↹4132047.6000 | ↹3738373.5000 | ↹9176543.0000 | 857994.2600 | 5.0000 |
| x | | ↹12772653.0000 | ↹4177752.6000 | ↹3781328.4000 | ↹9270083.1000 | 851216.6400 | 3.5000 |
| %RSD | | ↹1.254 | ↹0.816 | ↹0.930 | ↹0.868 | 0.689 | 63.888 |

**S5000** 06/17/2015 15:03:40

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | 215048.5700 | T 2842978.5000 | T 6733823.2000 | T 3595910.7000 | 442125.4000 | 475393.9100 | T 10065096.0000 | T 3004643.3000 | 119718.8200 |
| 2 | 15:05:00 | 214657.0000 | TM 2918404.2000 | T 6950062.2000 | T 3692744.4000 | 455476.4000 | 484051.5800 | T 10372211.0000 | T 3085519.3000 | 122387.1700 |
| 3 | 15:05:41 | 215945.4900 | TM 2948228.3000 | T 7070872.9000 | T 3753063.9000 | 462682.5700 | 496370.4800 | T 10491422.0000 | T 3120908.0000 | 123955.0900 |
| 4 | 15:06:21 | 216047.2500 | TM 2934505.5000 | T 7002391.4000 | T 3693574.3000 | 457202.1600 | 490094.9000 | T 10373453.0000 | T 3088680.5000 | 122392.2400 |
| 5 | 15:07:01 | 217205.9600 | T 2897718.2000 | T 6941665.2000 | T 3704291.4000 | 455671.6500 | 483511.5400 | T 10311638.0000 | T 3018003.4000 | 121699.7100 |
| x | | 215780.8500 | TM 2908366.9000 | T 6939763.0000 | T 3687916.9000 | 454631.6400 | 485884.4800 | T 10322764.0000 | T 3063550.9000 | 122030.6000 |
| %RSD | | 0.459 | TM 1.414 | T 1.817 | T 1.548 | 1.667 | 1.616 | T 1.532 | T 1.628 | 1.257 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | 433183.6700 | 32.5001 | T 14153345.0000 | T 13506720.0000 | 484491.0500 | T 18167359.0000 | T 5979566.5000 | 145232.1100 | T 18379018.0000 |
| 2 | 15:05:00 | 439754.7800 | 37.5001 | T 14372158.0000 | T 13812489.0000 | 493340.7800 | T 18566162.0000 | T 6052744.4000 | 147231.7400 | T 18933566.0000 |
| 3 | 15:05:41 | 442103.0100 | 30.0001 | TM 14691141.0000 | TM 14091834.0000 | 506522.3500 | TM 19218599.0000 | T 6252281.5000 | 151522.6400 | TM 19555472.0000 |
| 4 | 15:06:21 | 443073.8400 | 35.0001 | T 14398419.0000 | TM 13981285.0000 | 502897.3900 | TM 18889688.0000 | T 6193838.6000 | 149618.6900 | TM 19181710.0000 |
| 5 | 15:07:01 | 443445.3400 | 55.0002 | T 14519619.0000 | T 13915616.0000 | 499048.5400 | T 18615966.0000 | T 6162890.9000 | 149374.3700 | T 18876024.0000 |
| x | | 440312.1300 | 38.0001 | TM 14426936.0000 | TM 13861589.0000 | 497260.0200 | TM 18691555.0000 | T 6128264.4000 | 148595.9100 | TM 18985158.0000 |
| %RSD | | 0.962 | 26.068 | TM 1.374 | TM 1.607 | 1.739 | TM 2.095 | T 1.800 | 1.627 | TM 2.275 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | T 4078488.5000 | T 9756097.5000 | T 4572014.2000 | T 2689522.6000 | T 2079980.3000 | 844.2094 | 178.3352 | 139.1678 | 675799.4900 |
| 2 | 15:05:00 | T 4151014.8000 | T 9975549.1000 | T 4655762.2000 | T 2743843.0000 | T 2121537.4000 | 822.5406 | 180.0019 | 143.3346 | 687395.2600 |
| 3 | 15:05:41 | TM 4294798.4000 | TM 10225642.0000 | TM 4813549.6000 | TM 2804295.6000 | TM 2153664.2000 | 827.5411 | 175.0018 | 140.0012 | 688891.5700 |
| 4 | 15:06:21 | T 4194941.8000 | TM 10092996.0000 | TM 4764450.8000 | T 2777570.1000 | TM 2156528.6000 | 813.3730 | 171.6684 | 143.3346 | 693224.7300 |
| 5 | 15:07:01 | T 4148068.8000 | T 9890796.3000 | T 4674396.2000 | T 2746054.8000 | T 2120929.6000 | 859.2110 | 171.6684 | 144.1679 | 690895.1800 |
| x | | TM 4173462.4000 | TM 9988216.0000 | TM 4696034.6000 | TM 2752257.2000 | TM 2126528.0000 | 833.3750 | 175.3352 | 142.0012 | 687241.2500 |
| %RSD | | TM 1.908 | TM 1.811 | TM 2.019 | TM 1.562 | TM 1.461 | 2.193 | 2.168 | 1.586 | 0.984 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | 275.0045 | 170.0017 | 237.5034 | 95.0005 | 397.5095 | 781955.6500 | 786.2871 | 157158.0800 | 807.5391 |
| 2 | 15:05:00 | 210.0027 | 205.0025 | 202.5025 | 105.0007 | 475.0135 | 787569.1600 | 1083.8205 | 159644.6800 | 1221.3395 |
| 3 | 15:05:41 | 230.0032 | 172.5018 | 237.5034 | 105.0007 | 442.5118 | 798502.2800 | 2232.7991 | 163551.8600 | 2285.3133 |
| 4 | 15:06:21 | 195.0023 | 152.5014 | 160.0015 | 107.5007 | 370.0082 | 791457.9700 | 3599.5272 | 161601.8600 | 3296.9020 |
| 5 | 15:07:01 | 172.5018 | 170.0017 | 180.0019 | 92.5005 | 365.0080 | 796196.5500 | 1187.5846 | 160330.1500 | 1157.5804 |
| x | | 216.5029 | 174.0018 | 203.5025 | 101.0006 | 410.0102 | 791136.3200 | 1778.0037 | 160457.3200 | 1753.7349 |
| %RSD | | 17.956 | 10.971 | 16.947 | 6.688 | 11.610 | 0.841 | 64.977 | 1.476 | 58.416 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | T 2372847.4000 | T 5660384.1000 | 692457.1900 | 95.0005 | T 6756552.9000 | TM 1428592.3000 | T 2395541.7000 | 1125340.0000 | TM 10066571.0000 |
| 2 | 15:05:00 | 2540228.0000 | T 5795782.7000 | 704599.4000 | 95.0005 | TM 6945145.2000 | TM 1453951.7000 | T 2438569.6000 | 1138994.3000 | TM 10297328.0000 |
| 3 | 15:05:41 | 2580000.9000 | T 5851651.4000 | 707921.5100 | 92.5005 | TM 7018373.8000 | TM 1475916.7000 | TM 2496727.7000 | 1151849.5000 | TM 10423642.0000 |
| 4 | 15:06:21 | 2554350.7000 | T 5812364.7000 | 713555.4500 | 97.5006 | TM 6945112.9000 | TM 1476112.5000 | TM 2476465.4000 | 1138640.5000 | TM 10310484.0000 |
| 5 | 15:07:01 | T 2413579.1000 | T 5740360.5000 | 710812.7600 | 125.0009 | T 6885811.1000 | T 1446249.2000 | T 2435878.4000 | 1147787.0000 | T 10075188.0000 |
| x | | T 2492201.2000 | T 5772108.7000 | 705869.2600 | 101.0006 | TM 6910199.2000 | TM 1456164.5000 | TM 2448636.6000 | 1140522.3000 | TM 10234643.0000 |
| %RSD | | T 3.716 | T 1.285 | 1.162 | 13.398 | TM 1.417 | TM 1.395 | TM 1.604 | 0.896 | TM 1.538 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:04:20 | T 24379590.0000 | T 8018282.4000 | T 7147055.0000 | T 17609624.0000 | 803717.1500 | 10.0000 |
| 2 | 15:05:00 | T 25094625.0000 | T 8208162.1000 | T 7379712.5000 | T 18135316.0000 | 825056.6000 | 7.5000 |
| 3 | 15:05:41 | T 25187819.0000 | T 8320680.2000 | T 7450998.2000 | T 18426626.0000 | 827009.1500 | 15.0000 |
| 4 | 15:06:21 | T 25228639.0000 | T 8218964.5000 | T 7343540.5000 | T 18198755.0000 | 825168.1200 | 15.0000 |
| 5 | 15:07:01 | T 24518937.0000 | T 8120086.1000 | T 7245535.9000 | T 17818916.0000 | 826147.1100 | 7.5000 |
| x | | T 24881922.0000 | T 8177235.0000 | T 7313368.4000 | T 18037847.0000 | 821419.6300 | 11.0000 |
| %RSD | | T 1.612 | T 1.392 | T 1.625 | T 1.792 | 1.209 | 34.468 |

**S50000** 06/17/2015 15:08:03

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 203446.8200 | 972.5568 | T66085799.0000 | T35671357.0000 | T4550648.3000 | T4773136.7000 | T99948098.0000 | T29584246.0000 | 1207932.3000 |
| 2 | 15:09:24 | 205491.9200 | 633.3574 | T68967572.0000 | T36489843.0000 | T4658449.8000 | T4865403.9000 | T101783890.0000 | T30515393.0000 | 1263990.3000 |
| 3 | 15:10:04 | 206613.3100 | 414.1770 | T69967814.0000 | T37412324.0000 | T4734845.9000 | T5027890.0000 | T104614780.0000 | T31293080.0000 | 1279977.1000 |
| 4 | 15:10:44 | 206498.8600 | 319.1728 | T71389266.0000 | T37889403.0000 | T4779955.6000 | T5019765.7000 | T104479400.0000 | T31491989.0000 | 1302624.5000 |
| 5 | 15:11:24 | 208985.5500 | 257.5040 | T69219763.0000 | T36932186.0000 | T4692258.2000 | T4914149.7000 | T102741220.0000 | T30614170.0000 | 1266820.6000 |
| x | | 206207.2900 | 519.3536 | T69126043.0000 | T36879022.0000 | T4683231.6000 | T4920069.2000 | T102713480.0000 | T30699776.0000 | 1264269.0000 |
| %RSD | | 0.973 | 55.979 | T2.811 | T2.316 | T1.858 | T2.184 | T1.901 | T2.451 | 2.768 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 418020.4400 | 30.0001 | 5016.5095 | 4896.4381 | T3418212.0000 | 8787.1304 | T58747574.0000 | 1476625.4000 | 6099.7316 |
| 2 | 15:09:24 | 430395.9000 | 55.0002 | 2955.5240 | 3425.7040 | T3479299.6000 | 6882.8412 | T60333016.0000 | 1524425.3000 | 4278.5981 |
| 3 | 15:10:04 | 436817.4300 | 55.0002 | 1900.2166 | 2662.9254 | T3637691.9000 | 6022.1752 | T61153550.0000 | 1543783.6000 | 3320.6615 |
| 4 | 15:10:44 | 443690.3800 | 55.0002 | 1455.1270 | 2302.8181 | T3606680.6000 | 5309.1907 | T61458304.0000 | 1539973.1000 | 2817.9764 |
| 5 | 15:11:24 | 448791.7100 | 52.5002 | 1562.6465 | 1982.7358 | T3526849.4000 | 4958.9750 | T60222842.0000 | 1518622.6000 | 2235.2998 |
| x | | 435543.1700 | 49.5002 | 2578.0047 | 3054.1243 | T3533746.7000 | 6392.0625 | T60383057.0000 | 1520686.0000 | 3750.4535 |
| %RSD | | 2.758 | 22.130 | 57.665 | 38.035 | T2.550 | 23.906 | T1.747 | 1.760 | 40.323 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 1792.6928 | 5882.0752 | 2600.4057 | 1537.6418 | 732.5322 | 755.8676 | 136.6678 | 130.8344 | 658636.1100 |
| 2 | 15:09:24 | 1447.6257 | 4983.9900 | 2450.3602 | 975.0570 | 452.5123 | 857.5441 | 134.1678 | 125.8343 | 666265.7900 |
| 3 | 15:10:04 | 1227.5904 | 4421.1725 | 2000.2400 | 902.5489 | 370.0082 | 871.7123 | 154.1681 | 129.1677 | 679183.7100 |
| 4 | 15:10:44 | 1012.5615 | 4188.5524 | 1762.6864 | 852.5436 | 286.6716 | 932.5522 | 119.1675 | 128.3343 | 684939.9200 |
| 5 | 15:11:24 | 960.0553 | 3808.3700 | 1727.6791 | 677.5275 | 207.5026 | 996.7263 | 138.3345 | 151.6681 | 692568.3800 |
| x | | 1288.1052 | 4656.8320 | 2108.2743 | 989.0638 | 409.8454 | 882.8805 | 136.5011 | 133.1677 | 676318.7800 |
| %RSD | | 26.534 | 17.323 | 18.901 | 32.930 | 49.352 | 10.182 | 9.131 | 7.883 | 2.039 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 95.0005 | 35.0001 | 127.5010 | 32.5001 | 85.0004 | 733914.7600 | 452.5123 | 62.5002 | 422.5107 |
| 2 | 15:09:24 | 105.0007 | 55.0002 | 157.5015 | 30.0001 | 80.0004 | 752546.5900 | 595.0212 | 42.5001 | 617.5229 |
| 3 | 15:10:04 | 85.0004 | 52.5002 | 167.5017 | 37.5001 | 75.0003 | 756780.4600 | 1058.8173 | 22.5000 | 1116.3248 |
| 4 | 15:10:44 | 115.0008 | 65.0003 | 122.5009 | 17.5000 | 60.0002 | 767333.0900 | 1510.1368 | 20.0000 | 1465.1288 |
| 5 | 15:11:24 | 95.0005 | 50.0001 | 137.5011 | 22.5000 | 87.5005 | 770049.8700 | 528.7668 | 7.5000 | 542.5177 |
| x | | 99.0006 | 51.5002 | 142.5012 | 28.0000 | 77.5004 | 756124.9500 | 829.0509 | 31.0001 | 832.8010 |
| %RSD | | 11.517 | 21.048 | 13.590 | 28.516 | 14.061 | 1.901 | 54.057 | 69.748 | 52.996 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 656.2758 | 1580.1498 | 662356.8700 | 117.5008 | 3993.4566 | 387.5090 | 700.0294 | 1102716.4000 | 3795.8643 |
| 2 | 15:09:24 | 398.7595 | 952.5544 | 676738.8100 | 105.0007 | 2652.9222 | 240.0035 | 420.0106 | 1118106.5000 | 2339.0782 |
| 3 | 15:10:04 | 233.7533 | 652.5256 | 683390.1100 | 155.0014 | 1912.7195 | 145.0013 | 330.0065 | 1124810.1000 | 1668.9171 |
| 4 | 15:10:44 | 161.2516 | 525.0165 | 689677.7800 | 117.5008 | 1600.1536 | 122.5009 | 220.0029 | 1130358.5000 | 1183.8341 |
| 5 | 15:11:24 | 142.5012 | 402.5097 | 696249.4600 | 190.0022 | 1385.1151 | 80.0004 | 130.0010 | 1146756.0000 | 971.3066 |
| x | | 318.5083 | 822.5512 | 681682.6100 | 137.0012 | 2308.8734 | 195.0030 | 360.0101 | 1124549.5000 | 1991.8001 |
| %RSD | | 67.231 | 57.176 | 1.908 | 25.593 | 45.779 | 62.841 | 60.954 | 1.437 | 57.099 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:08:43 | 8928.5306 | 2540.3872 | 2285.3133 | 5436.7729 | 757089.2000 | 0.0000 |
| 2 | 15:09:24 | 5854.5558 | 1592.6522 | 1465.1288 | 3393.1907 | 764187.8400 | 2.5000 |
| 3 | 15:10:04 | 3813.3723 | 1105.0733 | 1022.5627 | 2425.3529 | 773454.5500 | 2.5000 |
| 4 | 15:10:44 | 2993.0374 | 887.5473 | 797.5382 | 1945.2270 | 775351.7900 | 0.0000 |
| 5 | 15:11:24 | 2255.3051 | 705.0298 | 665.0265 | 1407.6189 | 785000.4200 | 0.0000 |
| x | | 4768.9602 | 1366.1379 | 1247.1139 | 2921.6325 | 771016.7600 | 1.0000 |
| %RSD | | 56.330 | 53.845 | 52.531 | 54.227 | 1.392 | 136.931 |

**S100000** 06/17/2015 15:12:26

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 195012.9100 | 145.0013 | TM 136315750.0000 | T 72019814.0000 | TM 9089305.3000 | TM 9552744.2000 | TM 201494000.0000 | T 58584773.0000 | TM 2478137.0000 |
| 2 | 15:13:47 | 197040.6100 | 154.1681 | TM 138603070.0000 | TM 73983731.0000 | T 9205315.1000 | TM 9700994.7000 | TM 202570050.0000 | T 59512181.0000 | T 2502719.2000 |
| 3 | 15:14:27 | 196074.9000 | 112.5008 | TM 139419530.0000 | TM 74254576.0000 | TM 9389655.6000 | TM 9795874.2000 | TM 205930370.0000 | TM 60574370.0000 | TM 2559900.6000 |
| 4 | 15:15:07 | 199005.6600 | 101.6673 | TM 142019500.0000 | TM 74397195.0000 | T 9327225.3000 | T 9746289.5000 | T 204142900.0000 | T 60762303.0000 | T 2557912.2000 |
| 5 | 15:15:48 | 198496.2200 | 90.0005 | TM 141369070.0000 | T 74137825.0000 | T 9364792.9000 | T 9724217.3000 | T 204894740.0000 | T 60333009.0000 | T 2543183.1000 |
| x | | 197126.0600 | 120.6676 | TM 139545380.0000 | TM 73758628.0000 | TM 9275258.9000 | TM 9704024.0000 | TM 203806410.0000 | TM 59953327.0000 | TM 2528370.4000 |
| %RSD | | 0.841 | 23.006 | TM 1.633 | TM 1.334 | TM 1.356 | TM 0.943 | TM 0.874 | TM 1.504 | TM 1.435 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 428801.7900 | 77.5004 | 872.5457 | 1760.1859 | TM 6885788.2000 | 8276.6081 | TM 117756120.0000 | TM 2967292.0000 | 3200.6145 |
| 2 | 15:13:47 | 436010.5200 | 57.5002 | 635.0242 | 1552.6446 | T 6951607.0000 | 8264.0957 | T 117833940.0000 | T 2987188.2000 | 3240.6300 |
| 3 | 15:14:27 | 441577.4700 | 62.5002 | 477.5137 | 1710.1755 | TM 7081514.1000 | 8411.7433 | TM 119157700.0000 | TM 3034930.4000 | 3118.0832 |
| 4 | 15:15:07 | 446017.2900 | 80.0004 | 380.0087 | 1560.1460 | T 7004669.7000 | 7791.1404 | T 119035890.0000 | T 3012379.6000 | 2890.5012 |
| 5 | 15:15:48 | 450727.0800 | 42.5001 | 462.5128 | 1517.6382 | T 7036518.4000 | 8131.4653 | T 118714360.0000 | T 3010388.6000 | 2767.9596 |
| x | | 440626.8300 | 64.0003 | 565.5210 | 1620.1580 | TM 6992019.5000 | 8175.0106 | TM 118499600.0000 | TM 3002435.8000 | 3043.5577 |
| %RSD | | 1.943 | 24.016 | 34.455 | 6.646 | TM 1.086 | 2.892 | TM 0.560 | TM 0.863 | 6.742 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 1612.6560 | 4271.0943 | 1960.2305 | 820.0404 | 183.3354 | 983.3914 | 138.3345 | 155.0014 | 648557.3000 |
| 2 | 15:13:47 | 1467.6292 | 4251.0840 | 1947.7276 | 762.5349 | 166.6683 | 1012.5615 | 122.5009 | 155.8348 | 668943.0400 |
| 3 | 15:14:27 | 1557.6456 | 4311.1149 | 1922.7218 | 665.0265 | 124.1676 | 1064.2346 | 119.1675 | 142.5012 | 662294.7100 |
| 4 | 15:15:07 | 1597.6531 | 4146.0311 | 2010.2424 | 757.5344 | 117.5008 | 1100.0726 | 139.1678 | 159.1682 | 675726.4000 |
| 5 | 15:15:48 | 1442.6249 | 4158.5373 | 2177.7845 | 742.5331 | 124.1676 | 1145.9121 | 131.6677 | 145.8346 | 676373.3600 |
| x | | 1535.6418 | 4227.5723 | 2003.7414 | 749.5339 | 143.1679 | 1061.2344 | 130.1677 | 151.6681 | 666378.9600 |
| %RSD | | 4.995 | 1.707 | 5.110 | 7.427 | 20.798 | 6.164 | 6.975 | 4.695 | 1.724 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 210.0027 | 102.5006 | 257.5040 | 55.0002 | 160.0015 | 716938.1000 | 445.0119 | 12.5000 | 423.7608 |
| 2 | 15:13:47 | 117.5008 | 110.0007 | 275.0045 | 55.0002 | 135.0011 | 733312.5500 | 600.0216 | 12.5000 | 552.5183 |
| 3 | 15:14:27 | 195.0023 | 130.0010 | 297.5053 | 40.0001 | 97.5006 | 740446.3700 | 841.2925 | 10.0000 | 778.7864 |
| 4 | 15:15:07 | 167.5017 | 92.5005 | 297.5053 | 37.5001 | 130.0010 | 742156.4100 | 1006.3108 | 5.0000 | 1037.5646 |
| 5 | 15:15:48 | 180.0019 | 107.5007 | 267.5043 | 55.0002 | 125.0009 | 747446.8400 | 415.0103 | 20.0000 | 398.7595 |
| x | | 174.0019 | 108.5007 | 279.0047 | 48.5001 | 129.5010 | 736060.0500 | 661.5294 | 12.0000 | 638.2779 |
| %RSD | | 20.335 | 12.683 | 6.449 | 18.442 | 17.289 | 1.606 | 38.734 | 45.166 | 42.179 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 88.7505 | 180.0019 | 655111.3800 | 55.0002 | 857.5441 | 60.0002 | 117.5008 | 1057121.1000 | 581.2703 |
| 2 | 15:13:47 | 76.2503 | 167.5017 | 670041.2200 | 75.0003 | 802.5386 | 45.0001 | 132.5011 | 1079487.0000 | 447.5120 |
| 3 | 15:14:27 | 55.0002 | 140.0012 | 670793.2600 | 62.5002 | 752.5340 | 50.0001 | 105.0007 | 1085719.0000 | 332.5066 |
| 4 | 15:15:07 | 37.5001 | 115.0008 | 669881.6300 | 70.0003 | 667.5267 | 25.0000 | 50.0001 | 1095634.7000 | 273.7545 |
| 5 | 15:15:48 | 37.5001 | 92.5005 | 680134.2400 | 67.5003 | 592.5211 | 27.5000 | 45.0001 | 1094958.9000 | 283.7548 |
| x | | 59.0002 | 139.0012 | 669192.3400 | 66.0003 | 734.5329 | 41.5001 | 90.0006 | 1082584.2000 | 383.7597 |
| %RSD | | 39.049 | 26.020 | 1.340 | 11.552 | 14.398 | 36.044 | 44.488 | 1.454 | 33.926 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:13:07 | 1546.3935 | 505.0153 | 472.5134 | 1147.5790 | 708902.3700 | 5.0000 |
| 2 | 15:13:47 | 1081.3202 | 480.0138 | 372.5083 | 947.5539 | 722837.7900 | 2.5000 |
| 3 | 15:14:27 | 927.5516 | 387.5090 | 320.0061 | 920.0508 | 728134.1900 | 5.0000 |
| 4 | 15:15:07 | 703.7797 | 362.5079 | 277.5046 | 787.5372 | 724010.8600 | 2.5000 |
| 5 | 15:15:48 | 571.2696 | 340.0069 | 297.5053 | 705.0298 | 730556.8200 | 2.5000 |
| x | | 966.0629 | 415.0106 | 348.0076 | 901.5501 | 722888.4100 | 3.5000 |
| %RSD | | 39.287 | 17.651 | 22.446 | 18.775 | 1.164 | 39.123 |

**ICV1** 06/17/2015 15:16:50

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 225537.9600 | 63891.4920 | T3132184.6000 | 983199.9400 | 120033.3000 | 129351.1700 | T1216616.6000 | T1381641.1000 | 54955.6120 |
| 2 | 15:18:10 | 226298.1600 | 64621.2530 | T3168350.1000 | 977588.8000 | 122092.9000 | 130072.2700 | 1210900.4000 | T1404798.7000 | 56070.5020 |
| 3 | 15:18:51 | 227417.1800 | 64162.7310 | T3162103.1000 | 1000588.5000 | 124650.3400 | 130569.9600 | 1226049.1000 | T1424330.9000 | 56382.5970 |
| 4 | 15:19:31 | 230112.1600 | 64106.4670 | T3148708.4000 | 985717.9900 | 121108.6900 | 129772.6500 | 1197322.2000 | T1407684.0000 | 56312.1230 |
| 5 | 15:20:11 | 227636.3700 | 63582.4750 | T3113533.4000 | 971023.6400 | 119500.7300 | 126873.5200 | T1184342.9000 | T1369284.6000 | 55234.9490 |
| x | | 227400.3700 | 64072.8840 | T3144975.9000 | 983623.7800 | 121477.1900 | 129327.9100 | T1207046.3000 | T1397547.9000 | 55791.1560 |
| %RSD | | 0.765 | 0.596 | T0.712 | 1.122 | 1.676 | 1.115 | T1.360 | T1.569 | 1.171 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 479275.8200 | 45.0001 | 309463.8200 | 293646.6200 | 82190.8310 | 397468.0600 | 1481218.6000 | 34448.5550 | 411484.3900 |
| 2 | 15:18:10 | 491877.9900 | 50.0001 | 313811.9800 | 298357.0900 | 83375.0070 | 400380.1200 | 1484797.0000 | 34089.5840 | 416754.3300 |
| 3 | 15:18:51 | 488536.0000 | 50.0001 | 314725.4800 | 300546.1800 | 82771.5360 | 402149.8500 | 1485244.8000 | 34430.9830 | 418658.8200 |
| 4 | 15:19:31 | 490645.9500 | 27.5000 | 314639.8400 | 297890.8400 | 83354.8070 | 402485.4900 | 1488996.8000 | 34410.9000 | 419667.7100 |
| 5 | 15:20:11 | 490761.2000 | 52.5002 | 309850.2900 | 296924.7700 | 81837.3780 | 396487.9900 | 1461354.1000 | 34230.1580 | 413448.0900 |
| x | | 488219.3900 | 45.0001 | 312498.2800 | 297473.1000 | 82705.9120 | 399794.3000 | 1480322.3000 | 34322.0360 | 416002.6700 |
| %RSD | | 1.054 | 22.567 | 0.839 | 0.846 | 0.832 | 0.679 | 0.740 | 0.457 | 0.833 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 94146.3250 | 225377.0300 | 107924.3600 | 124619.8900 | 93743.4880 | 25493.9370 | 9879.1858 | 136.6678 | 747193.0200 |
| 2 | 15:18:10 | 95549.6620 | 228533.7700 | 109393.3300 | 125797.3900 | 94924.2420 | 25340.9710 | 9804.9315 | 129.1677 | 755269.6900 |
| 3 | 15:18:51 | 95580.0070 | 228202.3800 | 106908.9000 | 129229.3000 | 94591.3210 | 25602.6030 | 10001.8320 | 130.0010 | 755351.6400 |
| 4 | 15:19:31 | 95210.8160 | 228690.4900 | 109917.6600 | 127820.3200 | 95040.5560 | 25595.9150 | 10013.5130 | 144.1679 | 761295.2000 |
| 5 | 15:20:11 | 93038.9920 | 224927.6300 | 106189.7900 | 127114.6500 | 93713.9920 | 25034.2130 | 9914.2273 | 144.1679 | 757892.5300 |
| x | | 94705.1600 | 227146.2600 | 108066.8100 | 126916.3100 | 94402.7200 | 25413.5280 | 9922.7378 | 136.8345 | 755400.4200 |
| %RSD | | 1.159 | 0.808 | 1.468 | 1.406 | 0.675 | 0.932 | 0.878 | 5.334 | 0.689 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 130.0010 | 22.5000 | 57.5002 | 10.0000 | 12.5000 | 867444.0200 | 257459.1100 | 3648.2984 | 245882.2500 |
| 2 | 15:18:10 | 112.5008 | 22.5000 | 62.5002 | 12.5000 | 17.5000 | 869001.9800 | 261263.5600 | 3605.7799 | 251843.8700 |
| 3 | 15:18:51 | 97.5006 | 10.0000 | 60.0002 | 2.5000 | 22.5000 | 879449.9700 | 260478.2900 | 3635.7930 | 254778.5900 |
| 4 | 15:19:31 | 160.0015 | 0.0000 | 50.0001 | 10.0000 | 32.5001 | 878676.9500 | 265944.4400 | 3460.7184 | 257270.9300 |
| 5 | 15:20:11 | 120.0009 | 17.5000 | 67.5003 | 2.5000 | 7.5000 | 880250.7600 | 257346.9700 | 3575.7670 | 247240.3000 |
| x | | 124.0010 | 14.5000 | 59.5002 | 7.5000 | 18.5000 | 874964.7400 | 260498.4700 | 3585.2714 | 251403.1900 |
| %RSD | | 18.838 | 66.104 | 10.876 | 62.361 | 51.988 | 0.709 | 1.349 | 2.094 | 1.926 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 53546.4830 | 123120.3500 | 759726.2500 | 105.0007 | 279290.5600 | 30023.9890 | 52912.4520 | 1212361.7000 | 430240.6800 |
| 2 | 15:18:10 | 53224.4290 | 126411.5800 | 764155.0200 | 82.5004 | 280911.1900 | 30096.7510 | 53976.7450 | 1216114.0000 | 440451.4100 |
| 3 | 15:18:51 | 53975.4870 | 126393.8100 | 775067.0400 | 90.0005 | 285896.5000 | 30570.9720 | 54213.2730 | 1217662.6000 | 441926.5100 |
| 4 | 15:19:31 | 53910.0650 | 127335.4800 | 773361.4800 | 80.0004 | 283806.8600 | 30897.1720 | 54454.8400 | 1241350.6000 | 443777.3300 |
| 5 | 15:20:11 | 53472.2580 | 125627.3500 | 777988.9000 | 57.5002 | 279760.9500 | 30249.8040 | 52691.0560 | 1244670.5000 | 434911.5200 |
| x | | 53625.7450 | 125777.7100 | 770059.7400 | 83.0004 | 281933.2100 | 30367.7380 | 53649.6730 | 1226431.9000 | 438261.4900 |
| %RSD | | 0.585 | 1.275 | 1.007 | 20.803 | 1.003 | 1.195 | 1.484 | 1.248 | 1.271 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:17:30 | 1051313.2000 | 342905.3200 | 303111.6300 | 745498.3600 | 872365.1300 | 2.5000 |
| 2 | 15:18:10 | 1063085.7000 | 349461.9300 | 308418.6300 | 752158.8200 | 885830.6600 | 0.0000 |
| 3 | 15:18:51 | 1074365.4000 | 352180.3600 | 307874.0300 | 758135.7300 | 886407.4200 | 2.5000 |
| 4 | 15:19:31 | 1084837.0000 | 351906.6600 | 310843.7900 | 763208.9300 | 894246.0200 | 2.5000 |
| 5 | 15:20:11 | 1060703.9000 | 347260.2000 | 304614.9900 | 750501.4200 | 894512.4600 | 2.5000 |
| x | | 1066861.0000 | 348742.8900 | 306972.6100 | 753900.6500 | 886672.3400 | 2.0000 |
| %RSD | | 1.216 | 1.098 | 1.009 | 0.914 | 1.016 | 55.902 |

**ICB1** 06/17/2015 15:21:17

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 228895.1600 | 76.6670 | 36841.2570 | 3810.8712 | 485.0141 | 405.0098 | 11710.7230 | 47505.0190 | 447.5120 |
| 2 | 15:22:37 | 229625.6800 | 75.0003 | 37157.6570 | 4181.0486 | 540.0175 | 480.0138 | 12709.6850 | 47600.5620 | 442.5118 |
| 3 | 15:23:18 | 230496.7400 | 67.5003 | 36130.6560 | 4070.9941 | 575.0198 | 585.0205 | 12754.7540 | 46848.8200 | 422.5107 |
| 4 | 15:23:58 | 232552.6900 | 75.8337 | 36193.4280 | 3770.8530 | 450.0122 | 520.0162 | 12669.6240 | 46765.8560 | 480.0138 |
| 5 | 15:24:39 | 233059.9000 | 87.5005 | 34722.1870 | 3685.8149 | 435.0114 | 500.0150 | 11467.8850 | 45931.2330 | 407.5100 |
| x | | 230926.0400 | 76.5004 | 36209.0370 | 3903.9164 | 497.0150 | 498.0151 | 12262.5340 | 46930.2980 | 440.0117 |
| %RSD | | 0.787 | 9.352 | 2.590 | 5.413 | 11.959 | 13.103 | 5.066 | 1.434 | 6.250 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 483606.8400 | 25.0000 | 682.5280 | 1227.5904 | 2973.0302 | 300.0054 | 105187.2000 | 887.5473 | 205.0025 |
| 2 | 15:22:37 | 490081.6600 | 10.0000 | 535.0172 | 1082.5703 | 2990.5365 | 287.5050 | 108428.3400 | 1077.5697 | 247.5037 |
| 3 | 15:23:18 | 489097.5400 | 12.5000 | 445.0119 | 1222.5897 | 3183.1078 | 322.5062 | 109818.8700 | 1015.0618 | 205.0025 |
| 4 | 15:23:58 | 493894.6800 | 27.5000 | 352.5075 | 1240.0923 | 3008.0428 | 365.0080 | 109497.1800 | 897.5483 | 237.5034 |
| 5 | 15:24:39 | 497765.0900 | 17.5000 | 555.0185 | 1192.5853 | 2747.9530 | 335.0067 | 110160.8400 | 970.0565 | 232.5032 |
| x | | 490889.1600 | 18.5000 | 514.0166 | 1193.0856 | 2980.5341 | 322.0063 | 108618.4900 | 969.5567 | 225.5031 |
| %RSD | | 1.084 | 41.211 | 24.096 | 5.381 | 5.199 | 9.436 | 1.864 | 8.259 | 8.638 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 55.0002 | 2567.8956 | 1115.0746 | 355.0076 | 77.5004 | 1092.5716 | 162.5016 | 156.6681 | 753133.7500 |
| 2 | 15:22:37 | 37.5001 | 2435.3558 | 1160.0807 | 370.0082 | 75.8337 | 1130.0766 | 155.0014 | 150.0014 | 753903.9400 |
| 3 | 15:23:18 | 72.5003 | 2420.3514 | 1215.0886 | 415.0103 | 70.0003 | 1135.9107 | 136.6678 | 170.0017 | 758160.3200 |
| 4 | 15:23:58 | 57.5002 | 2527.8834 | 1055.0668 | 387.5090 | 66.6669 | 1038.3980 | 163.3349 | 153.3347 | 767639.4700 |
| 5 | 15:24:39 | 70.0003 | 2475.3676 | 1060.0674 | 407.5100 | 60.0002 | 1095.9054 | 131.6677 | 129.1677 | 770608.1000 |
| x | | 58.5002 | 2485.3708 | 1121.0756 | 387.0090 | 70.0003 | 1098.5725 | 149.8347 | 151.8347 | 760689.1200 |
| %RSD | | 23.909 | 2.500 | 6.062 | 6.483 | 10.137 | 3.540 | 9.859 | 9.729 | 1.052 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 22.5000 | 5.0000 | 10.0000 | 7.5000 | 2.5000 | 869929.1400 | 388.7591 | 2.5000 | 370.0082 |
| 2 | 15:22:37 | 17.5000 | 5.0000 | 5.0000 | 5.0000 | 7.5000 | 877075.7200 | 366.2581 | 7.5000 | 375.0084 |
| 3 | 15:23:18 | 12.5000 | 2.5000 | 5.0000 | 0.0000 | 2.5000 | 877554.9500 | 577.5200 | 10.0000 | 466.2630 |
| 4 | 15:23:58 | 12.5000 | 5.0000 | 5.0000 | 0.0000 | 5.0000 | 888365.3700 | 576.2699 | 2.5000 | 481.2639 |
| 5 | 15:24:39 | 22.5000 | 5.0000 | 2.5000 | 7.5000 | 5.0000 | 893323.2200 | 168.7517 | 2.5000 | 175.0018 |
| x | | 17.5000 | 4.5000 | 5.5000 | 4.0000 | 4.5000 | 881249.6800 | 415.5118 | 5.0000 | 373.5091 |
| %RSD | | 28.571 | 24.845 | 49.793 | 94.786 | 46.481 | 1.070 | 41.006 | 70.711 | 32.690 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 31.2501 | 75.0003 | 765869.7200 | 67.5003 | 1452.6266 | 22.5000 | 30.0001 | 1216574.5000 | 306.2556 |
| 2 | 15:22:37 | 25.0000 | 65.0003 | 769048.4200 | 57.5002 | 1035.0643 | 25.0000 | 42.5001 | 1224343.6000 | 256.2539 |
| 3 | 15:23:18 | 35.0001 | 100.0006 | 776677.0900 | 55.0002 | 817.5401 | 20.0000 | 25.0000 | 1223346.9000 | 198.7524 |
| 4 | 15:23:58 | 27.5000 | 65.0003 | 784167.1800 | 40.0001 | 680.0278 | 20.0000 | 25.0000 | 1244780.2000 | 166.2517 |
| 5 | 15:24:39 | 28.7500 | 87.5005 | 788476.7600 | 45.0001 | 602.5218 | 17.5000 | 15.0000 | 1251773.3000 | 203.7525 |
| x | | 29.5001 | 78.5004 | 776847.8300 | 53.0002 | 917.5561 | 21.0000 | 27.5000 | 1232163.7000 | 226.2532 |
| %RSD | | 12.922 | 19.320 | 1.238 | 20.398 | 37.190 | 13.574 | 36.364 | 1.235 | 24.372 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:21:57 | 680.0278 | 160.0015 | 122.5009 | 327.5064 | 881906.6200 | 5.0000 |
| 2 | 15:22:37 | 606.2721 | 157.5015 | 120.0009 | 357.5077 | 879713.2000 | 2.5000 |
| 3 | 15:23:18 | 498.7649 | 152.5014 | 137.5011 | 337.5068 | 885210.9600 | 0.0000 |
| 4 | 15:23:58 | 468.7632 | 150.0014 | 130.0010 | 277.5046 | 902498.5900 | 7.5000 |
| 5 | 15:24:39 | 446.2620 | 157.5015 | 100.0006 | 237.5034 | 912300.9600 | 0.0000 |
| x | | 540.0180 | 155.5015 | 122.0009 | 307.5058 | 892326.0600 | 3.0000 |
| %RSD | | 18.416 | 2.642 | 11.538 | 15.932 | 1.605 | 108.653 |

**ICSA1** 06/17/2015 15:25:40

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 191169.5500 | 201.6691 | T 132307990.0000 | T 69773386.0000 | TM 9071199.6000 | TM 9677748.2000 | TM 202140880.0000 | TM 61838304.0000 | TM 2547539.8000 |
| 2 | 15:27:01 | 191091.1100 | 175.0018 | T 131601170.0000 | T 69373817.0000 | TM 9052665.7000 | TM 9680048.9000 | TM 201958510.0000 | TM 62602731.0000 | TM 2556721.7000 |
| 3 | 15:27:41 | 191533.6000 | 205.0025 | T 133100520.0000 | T 70137461.0000 | TM 9202959.7000 | TM 9854326.0000 | TM 204450320.0000 | TM 63313830.0000 | TM 2557431.0000 |
| 4 | 15:28:21 | 191432.1400 | 215.8361 | T 133032850.0000 | T 70101350.0000 | T 9024377.0000 | TM 9785281.4000 | TM 204466260.0000 | TM 64243132.0000 | TM 2585939.3000 |
| 5 | 15:29:02 | 191305.1100 | 197.5023 | T 128946370.0000 | T 69828086.0000 | TM 9172696.3000 | TM 9840569.8000 | TM 203556250.0000 | TM 64361705.0000 | TM 2528631.3000 |
| X | | 191306.3000 | 199.0024 | T 131797780.0000 | T 69842820.0000 | TM 9104779.7000 | TM 9767594.9000 | TM 203314440.0000 | TM 63271941.0000 | TM 2555252.6000 |
| %RSD | | 0.095 | 7.558 | T 1.295 | T 0.441 | TM 0.861 | TM 0.870 | TM 0.597 | TM 1.701 | TM 0.811 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 425701.2300 | 415824.5600 | 6620.1285 | 55554.5630 | TM 7005004.6000 | 30653.7760 | TM 120729050.0000 | TM 3088264.5000 | 5029.0170 |
| 2 | 15:27:01 | 429018.7900 | 420390.3000 | 6660.1604 | 56090.6360 | TM 7045031.9000 | 31027.6560 | TM 121323490.0000 | TM 3119160.7000 | 5299.1843 |
| 3 | 15:27:41 | 431300.9300 | 421139.2300 | 6627.6345 | 57208.1950 | TM 7095959.1000 | 31720.2560 | TM 121998250.0000 | TM 3124074.7000 | 5216.6323 |
| 4 | 15:28:21 | 436052.6400 | 423665.0500 | 6772.7511 | 57641.1630 | TM 7153641.3000 | 31582.2330 | TM 123242590.0000 | TM 3166860.6000 | 4983.9900 |
| 5 | 15:29:02 | 437453.2600 | 422119.5100 | 6727.7146 | 57082.3360 | TM 7159586.8000 | 30887.1350 | TM 123653590.0000 | TM 3179936.4000 | 5196.6198 |
| X | | 431905.3700 | 420627.7300 | 6681.6778 | 56715.3790 | TM 7091844.7000 | 31174.2110 | TM 122189390.0000 | TM 3135659.4000 | 5145.0887 |
| %RSD | | 1.129 | 0.702 | 0.992 | 1.520 | TM 0.950 | 1.469 | TM 1.017 | TM 1.192 | 2.588 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 5486.8057 | 16694.2050 | 8486.8194 | 6374.9375 | 426.6776 | 945.0536 | 119.1675 | 155.8348 | 679830.9200 |
| 2 | 15:27:01 | 5624.3974 | 17182.6960 | 8516.8500 | 6437.4855 | 383.3422 | 883.3802 | 148.3347 | 147.5013 | 687633.7900 |
| 3 | 15:27:41 | 5474.2975 | 17027.3780 | 8526.8602 | 6292.3747 | 420.8440 | 1035.8977 | 145.8346 | 161.6682 | 695535.9100 |
| 4 | 15:28:21 | 5656.9194 | 17084.9960 | 8774.6172 | 6600.1127 | 401.6764 | 1045.0655 | 152.5014 | 153.3347 | 701430.5800 |
| 5 | 15:29:02 | 5804.5208 | 17277.8930 | 8664.5021 | 6652.6544 | 385.8423 | 1005.8940 | 154.1681 | 150.0014 | 708706.7300 |
| X | | 5609.3882 | 17053.4340 | 8593.9298 | 6471.5130 | 403.6765 | 983.0582 | 144.0013 | 153.6681 | 694627.5900 |
| %RSD | | 2.422 | 1.304 | 1.420 | 2.343 | 4.891 | 6.925 | 9.909 | 3.569 | 1.631 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 923675.0000 | 1641968.8000 | 1766222.9000 | 1027248.6000 | T 2824252.4000 | 755999.0900 | 96.2506 | 1457.6275 | 117.5008 |
| 2 | 15:27:01 | 930497.5700 | 1649577.4000 | 1770609.0000 | 1031975.1000 | T 2849580.7000 | 766055.7100 | 113.7508 | 1585.1507 | 128.7510 |
| 3 | 15:27:41 | 947947.1800 | 1674281.9000 | 1798706.5000 | 1045969.2000 | T 2884448.2000 | 780303.5300 | 105.0007 | 1455.1270 | 163.7516 |
| 4 | 15:28:21 | 952173.2000 | 1673376.7000 | 1794705.7000 | 1046683.6000 | T 2897668.4000 | 778429.8600 | 116.2508 | 1405.1185 | 147.5013 |
| 5 | 15:29:02 | 957885.6000 | 1699086.5000 | 1799142.2000 | 1048869.6000 | T 2892405.4000 | 785537.6800 | 110.0007 | 1385.1151 | 115.0008 |
| X | | 942435.7100 | 1667658.3000 | 1785877.3000 | 1040149.2000 | T 2869671.1000 | 773265.1700 | 108.2507 | 1457.6278 | 134.5011 |
| %RSD | | 1.554 | 1.358 | 0.902 | 0.944 | T 1.100 | 1.553 | 7.331 | 5.345 | 15.448 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 1740.1817 | 2810.4738 | 689881.1200 | 197.5023 | 2095.2634 | 362.5079 | 690.0286 | 1160100.0000 | 232.5032 |
| 2 | 15:27:01 | 1660.1654 | 2933.0161 | 704577.6700 | 237.5034 | 1847.7048 | 487.5143 | 747.5335 | 1166231.4000 | 212.5027 |
| 3 | 15:27:41 | 1727.6791 | 2810.4738 | 712310.3900 | 227.5031 | 1960.2305 | 407.5100 | 837.5421 | 1187872.3000 | 195.0023 |
| 4 | 15:28:21 | 1715.1765 | 2988.0356 | 720289.4300 | 222.5030 | 1777.6896 | 470.0133 | 832.5416 | 1202878.6000 | 177.5019 |
| 5 | 15:29:02 | 1786.4415 | 2995.5383 | 725659.1400 | 237.5034 | 1897.7161 | 502.5152 | 702.5296 | 1221973.0000 | 165.0016 |
| X | | 1725.9288 | 2907.5075 | 710543.5500 | 224.5030 | 1915.7209 | 446.0121 | 762.0351 | 1187811.1000 | 196.5024 |
| %RSD | | 2.641 | 3.158 | 1.977 | 7.319 | 6.298 | 13.239 | 9.188 | 2.158 | 13.721 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:26:20 | 558.7687 | 7265.6660 | 5761.9913 | 14540.1740 | 766989.7900 | 7.5000 |
| 2 | 15:27:01 | 501.2651 | 7343.2340 | 6147.2665 | 14725.4990 | 778473.6900 | 0.0000 |
| 3 | 15:27:41 | 391.2592 | 7703.5590 | 5804.5208 | 14800.6320 | 779574.8300 | 2.5000 |
| 4 | 15:28:21 | 392.5092 | 7605.9695 | 6152.2702 | 15051.0800 | 787866.6500 | 2.5000 |
| 5 | 15:29:02 | 356.2576 | 7540.9104 | 6017.1716 | 15083.6390 | 791752.8600 | 5.0000 |
| X | | 440.0120 | 7491.8678 | 5976.6441 | 14840.2050 | 780931.5600 | 3.5000 |
| %RSD | | 19.518 | 2.438 | 3.100 | 1.538 | 1.227 | 81.441 |

**ICSAB1** 06/17/2015 15:30:04

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 191204.5000 | 10338.9100 | T 129426580.0000 | T 69749130.0000 | TM 9106982.8000 | TM 9882509.4000 | TM 205450730.0000 | TM 63476887.0000 | T 2502491.3000 |
| 2 | 15:31:24 | 192294.1500 | 10469.9060 | T 131231390.0000 | T 69365803.0000 | TM 9247498.4000 | TM 9911148.2000 | TM 205544140.0000 | TM 64584174.0000 | TM 2552453.7000 |
| 3 | 15:32:04 | 192247.2500 | 10558.3510 | T 133566270.0000 | T 70981982.0000 | TM 9270862.1000 | TM 10070639.0000 | TM 211328390.0000 | TM 65310126.0000 | TM 2575503.6000 |
| 4 | 15:32:45 | 193189.5000 | 10413.1690 | T 133816190.0000 | T 70243139.0000 | T 9118831.2000 | TM 9812913.6000 | TM 203723020.0000 | TM 65527050.0000 | TM 2575959.5000 |
| 5 | 15:33:25 | 192167.9600 | 10278.0010 | T 128270440.0000 | T 68878339.0000 | T 9074245.0000 | TM 9694452.2000 | TM 202622560.0000 | TM 63687463.0000 | T 2504289.7000 |
| x | | 192220.6700 | 10411.6670 | T 131262170.0000 | T 69843678.0000 | TM 9163683.9000 | TM 9874332.4000 | TM 205733770.0000 | TM 64517140.0000 | TM 2542139.5000 |
| %RSD | | 0.366 | 1.053 | T 1.872 | T 1.160 | TM 0.972 | TM 1.397 | TM 1.633 | TM 1.434 | TM 1.441 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 438660.5600 | 415023.5800 | 63710.1110 | 111526.3300 | T 7099238.9000 | 104394.8300 | TM 123175950.0000 | TM 3160294.5000 | 77410.3800 |
| 2 | 15:31:24 | 439503.2600 | 423339.1000 | 64329.8450 | 111556.7300 | TM 7156781.5000 | 106303.7300 | TM 123605630.0000 | TM 3194127.8000 | 78253.1970 |
| 3 | 15:32:04 | 441011.1300 | 426259.9900 | 64959.7030 | 114070.4200 | TM 7238538.7000 | 107531.8400 | TM 124805630.0000 | TM 3235332.1000 | 79916.3690 |
| 4 | 15:32:45 | 446647.2200 | 421746.3000 | 63702.5540 | 112473.9400 | T 7159893.8000 | 104663.1600 | T 122500690.0000 | TM 3163372.8000 | 78793.2500 |
| 5 | 15:33:25 | 445516.5500 | 416562.5900 | 62921.6550 | 110687.7600 | T 7113656.0000 | 105726.4600 | T 122513750.0000 | TM 3158515.2000 | 76787.1540 |
| x | | 442267.7400 | 420586.3100 | 63924.7740 | 112063.0300 | TM 7153621.8000 | 105724.0000 | TM 123320330.0000 | TM 3182328.5000 | 78232.0700 |
| %RSD | | 0.815 | 1.117 | 1.196 | 1.149 | TM 0.760 | 1.205 | TM 0.773 | TM 1.038 | 1.554 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 21437.5390 | 54001.9070 | 25734.6750 | 15639.6620 | 8506.8398 | 2960.5258 | 965.8893 | 154.1681 | 719084.2200 |
| 2 | 15:31:24 | 21547.8230 | 54427.1600 | 26517.1220 | 15977.8030 | 8464.2965 | 3117.2496 | 955.8882 | 152.5014 | 728387.4500 |
| 3 | 15:32:04 | 21883.6960 | 55081.4380 | 27452.6450 | 16210.7520 | 8732.0725 | 3165.6011 | 1000.0600 | 161.6682 | 715320.0300 |
| 4 | 15:32:45 | 21765.8880 | 54948.0620 | 25885.1400 | 15967.7840 | 8566.9012 | 3178.1059 | 952.5544 | 148.3347 | 730593.6000 |
| 5 | 15:33:25 | 21397.4360 | 52364.0040 | 25792.3530 | 15895.1450 | 8385.8839 | 3075.5674 | 944.2202 | 154.1681 | 725207.2300 |
| x | | 21606.4760 | 54164.5140 | 26276.3870 | 15938.2290 | 8531.1988 | 3099.4100 | 963.7224 | 154.1681 | 723718.5000 |
| %RSD | | 0.976 | 2.021 | 2.772 | 1.285 | 1.526 | 2.829 | 2.256 | 3.129 | 0.883 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 943527.8000 | 1683675.0000 | 1800839.5000 | 1046607.4000 | T 2879717.8000 | 799902.4900 | 44514.8270 | 2050.2522 | 43283.3660 |
| 2 | 15:31:24 | 962119.1900 | 1687318.6000 | 1812452.3000 | 1059589.6000 | T 2906784.7000 | 801813.7300 | 44670.6580 | 2145.2761 | 43956.8770 |
| 3 | 15:32:04 | 972420.8500 | 1727687.9000 | 1859627.7000 | 1075667.1000 | T 2967701.1000 | 800646.6200 | 45928.7190 | 2130.2722 | 44571.3790 |
| 4 | 15:32:45 | 955775.1600 | 1661490.5000 | 1806876.0000 | 1049745.2000 | T 2901976.0000 | 806143.0200 | 45858.3330 | 2137.7742 | 44215.7420 |
| 5 | 15:33:25 | 938393.7300 | 1655470.1000 | 1775542.1000 | 1037891.7000 | T 2860388.7000 | 810009.8800 | 43818.6520 | 2145.2761 | 43121.2790 |
| x | | 954447.3500 | 1683128.4000 | 1811067.5000 | 1053900.2000 | T 2903313.7000 | 803703.1500 | 44958.2380 | 2121.7702 | 43829.7280 |
| %RSD | | 1.445 | 1.690 | 1.689 | 1.369 | T 1.395 | 0.532 | 2.029 | 1.907 | 1.404 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 11371.5030 | 25105.2600 | 735841.5700 | 272.5045 | 30026.4980 | 6717.7066 | 11918.5170 | 1243579.1000 | 42454.1160 |
| 2 | 15:31:24 | 11819.6260 | 25456.3220 | 740070.0400 | 225.0030 | 30568.4630 | 6457.5010 | 11688.1910 | 1244017.9000 | 42245.5610 |
| 3 | 15:32:04 | 11469.1370 | 25659.4440 | 730920.4800 | 230.0032 | 30365.2220 | 6925.3765 | 11730.7510 | 1239119.8000 | 42717.9600 |
| 4 | 15:32:45 | 11544.2410 | 25870.0930 | 741269.9800 | 247.5037 | 29145.8800 | 6595.1087 | 11875.9560 | 1238574.5000 | 42295.8140 |
| 5 | 15:33:25 | 11325.1900 | 25095.2290 | 744376.9600 | 277.5046 | 29241.2130 | 6502.5360 | 11442.8510 | 1259980.7000 | 41569.6740 |
| x | | 11505.9400 | 25437.2700 | 738495.8100 | 250.5038 | 29869.4550 | 6639.6457 | 11731.2530 | 1245054.4000 | 42256.6250 |
| %RSD | | 1.694 | 1.339 | 0.707 | 9.557 | 2.168 | 2.835 | 1.601 | 0.699 | 1.008 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:30:44 | 100377.1700 | 40957.9060 | 35246.8830 | 85812.0590 | 799590.8600 | 0.0000 |
| 2 | 15:31:24 | 102405.3700 | 41618.6680 | 35186.6290 | 86281.8730 | 806678.8400 | 0.0000 |
| 3 | 15:32:04 | 103462.0500 | 42515.6790 | 35628.5010 | 86941.1730 | 800781.1700 | 0.0000 |
| 4 | 15:32:45 | 101856.2000 | 42126.2090 | 35299.6060 | 85597.3680 | 799025.2800 | 5.0000 |
| 5 | 15:33:25 | 100191.2000 | 41131.2570 | 34019.2970 | 83380.0580 | 816032.0600 | 7.5000 |
| x | | 101658.4000 | 41669.9440 | 35076.1830 | 85602.5060 | 804421.6400 | 2.5000 |
| %RSD | | 1.360 | 1.575 | 1.754 | 1.571 | 0.891 | 141.421 |

**CCV1** 06/17/2015 15:34:27

User.Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | 202698.9200 | ↹1422042.5000 | ↹69873815.0000 | ↹37361773.0000 | ↹4753784.4000 | ↹5060602.9000 | ↹105657260.0000 | ↹32051949.0000 | 1299631.7000 |
| 2 | 15:35:47 | 204862.5400 | ↹1440494.8000 | ↹70938745.0000 | ↹37718071.0000 | ↹4797870.9000 | ↹5102782.2000 | ↹106050270.0000 | ↹32311713.0000 | 1319087.8000 |
| 3 | 15:36:28 | 204662.7200 | ↹1441363.4000 | ↹71305139.0000 | ↹38044019.0000 | ↹4853282.5000 | ↹5122481.8000 | ↹106532780.0000 | ↹32613277.0000 | 1328041.9000 |
| 4 | 15:37:08 | 205423.6000 | ↹1418578.2000 | ↹71529663.0000 | ↹37729333.0000 | ↹4754617.1000 | ↹5077522.6000 | ↹104300950.0000 | ↹32403892.0000 | 1313045.8000 |
| 5 | 15:37:48 | 206300.7100 | ↹1388805.7000 | ↹69691029.0000 | ↹37327582.0000 | ↹4692115.5000 | ↹4996183.6000 | ↹103708370.0000 | ↹31574069.0000 | 1314270.8000 |
| x | | 204789.7000 | ↹1422256.9000 | ↹70667678.0000 | ↹37636156.0000 | ↹4770334.1000 | ↹5071914.6000 | ↹105249930.0000 | ↹32190980.0000 | 1314815.6000 |
| %RSD | | 0.650 | ↹1.504 | ↹1.185 | ↹0.788 | ↹1.252 | ↹0.956 | ↹1.137 | ↹1.241 | 0.786 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | 454413.1500 | 245.0036 | ↹7659697.5000 | ↹7197219.0000 | ↹3647042.8000 | ↹9732845.3000 | ↹61251751.0000 | 1563742.5000 | ↹9874546.8000 |
| 2 | 15:35:47 | 459382.2900 | 202.5025 | ↹7720784.9000 | ↹7335009.3000 | ↹3666498.2000 | ↹9799138.1000 | ↹61737495.0000 | 1570196.7000 | ↹9979299.3000 |
| 3 | 15:36:28 | 462609.9500 | 145.0013 | ↹7771699.9000 | ↹7323455.1000 | ↹3696881.5000 | ↹9768907.4000 | ↹62063060.0000 | 1571759.3000 | ↹10026833.0000 |
| 4 | 15:37:08 | 464005.6700 | 102.5006 | ↹7665244.9000 | ↹7232713.5000 | ↹3658570.9000 | ↹9667152.4000 | ↹61241463.0000 | 1554567.4000 | ↹9909566.9000 |
| 5 | 15:37:48 | 471908.9700 | 132.5011 | ↹7509219.0000 | ↹7145191.3000 | ↹3653644.2000 | ↹9585556.0000 | ↹60872895.0000 | 1538135.6000 | ↹9705688.5000 |
| x | | 462464.0000 | 165.5018 | ↹7665329.2000 | ↹7246717.6000 | ↹3664527.5000 | ↹9710719.8000 | ↹61433333.0000 | 1559680.3000 | ↹9899186.9000 |
| %RSD | | 1.393 | 34.668 | ↹1.285 | ↹1.126 | ↹0.530 | ↹0.881 | ↹0.760 | 0.886 | ↹1.246 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | ↹2136031.0000 | ↹5023041.7000 | ↹2384061.7000 | 1389174.9000 | 1111769.2000 | 30841.9680 | 12264.0180 | 155.8348 | 725449.5100 |
| 2 | 15:35:47 | 2214619.0000 | ↹5039282.8000 | ↹2366014.7000 | 1393327.7000 | 1123723.8000 | 31333.7980 | 12311.5880 | 168.3350 | 731026.7200 |
| 3 | 15:36:28 | 2243678.4000 | ↹5080459.3000 | ↹2393529.3000 | 1400554.7000 | 1125701.8000 | 31569.6860 | 12142.1730 | 157.5015 | 732255.3800 |
| 4 | 15:37:08 | 2208473.5000 | ↹5077183.9000 | ↹2385025.0000 | 1380901.6000 | 1112811.3000 | 31687.6320 | 12139.6690 | 161.6682 | 734792.2600 |
| 5 | 15:37:48 | 2171671.4000 | ↹4948552.8000 | ↹2331847.2000 | 1379034.4000 | 1098030.6000 | 30738.2530 | 12075.4090 | 173.3351 | 743359.3600 |
| x | | ↹2194894.7000 | ↹5033704.1000 | ↹2372095.6000 | 1388598.7000 | 1114407.3000 | 31234.2670 | 12186.5710 | 163.3349 | 733376.6500 |
| %RSD | | ↹1.900 | ↹1.064 | ↹1.038 | 0.640 | 0.995 | 1.366 | 0.801 | 4.520 | 0.892 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | 727.5318 | 1187.5846 | 1305.1022 | 622.5233 | 1812.6971 | 825108.9200 | 648545.1500 | 82602.3700 | 623796.2400 |
| 2 | 15:35:47 | 542.5177 | 812.5396 | 912.5500 | 432.5112 | 1277.5979 | 818389.8200 | 655581.2600 | 82907.8820 | 627779.3100 |
| 3 | 15:36:28 | 440.0116 | 687.5284 | 660.0261 | 362.5079 | 962.5556 | 824470.0900 | 660576.0000 | 84544.1990 | 638073.8000 |
| 4 | 15:37:08 | 380.0087 | 520.0162 | 672.5271 | 352.5075 | 732.5322 | 823776.2500 | 661012.4000 | 82054.4970 | 637689.7600 |
| 5 | 15:37:48 | 375.0084 | 577.5200 | 580.0202 | 235.0033 | 630.0238 | 833677.0000 | 628868.2400 | 81986.3310 | 610589.9100 |
| x | | 493.0156 | 757.0378 | 826.0451 | 401.0106 | 1083.0813 | 825084.4200 | 650916.6100 | 82819.0560 | 627585.8000 |
| %RSD | | 29.906 | 35.054 | 35.740 | 35.585 | 44.107 | 0.666 | 2.045 | 1.253 | 1.809 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | 1289765.6000 | ↹3002653.0000 | 747916.2800 | 72.5003 | ↹3719975.1000 | 754870.8700 | 1344747.5000 | 1213253.6000 | ↹5229622.7000 |
| 2 | 15:35:47 | 1294141.3000 | ↹3029327.8000 | 746044.1100 | 87.5005 | ↹3727663.8000 | 764964.4700 | 1355667.9000 | 1220740.4000 | ↹5261653.3000 |
| 3 | 15:36:28 | 1296253.7000 | ↹3001855.8000 | 742219.1400 | 82.5004 | ↹3714543.0000 | 757234.0100 | 1346858.7000 | 1215564.3000 | ↹5216058.6000 |
| 4 | 15:37:08 | 1282096.3000 | ↹2974910.1000 | 744576.1300 | 80.0004 | ↹3647375.1000 | 751631.8000 | 1341040.2000 | 1218799.7000 | ↹5231555.3000 |
| 5 | 15:37:48 | 1257106.2000 | ↹2910017.0000 | 750962.8400 | 67.5003 | ↹3599114.8000 | 735710.7400 | 1312146.8000 | 1223465.0000 | ↹5076101.0000 |
| x | | 1283872.6000 | ↹2983752.7000 | 746343.7000 | 78.0004 | ↹3681734.3000 | 752882.3800 | 1340092.2000 | 1218364.6000 | ↹5202998.2000 |
| %RSD | | 1.240 | ↹1.525 | 0.445 | 10.236 | ↹1.528 | 1.433 | 1.233 | 0.333 | ↹1.400 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:35:07 | ↹12656445.0000 | ↹4151150.1000 | ↹3736363.0000 | ↹9144309.5000 | 815569.9400 | 2.5000 |
| 2 | 15:35:47 | ↹12745078.0000 | ↹4144823.7000 | ↹3728973.4000 | ↹9226309.1000 | 818473.7400 | 2.5000 |
| 3 | 15:36:28 | ↹12669644.0000 | ↹4135607.3000 | ↹3705393.8000 | ↹9204086.6000 | 814138.3400 | 2.5000 |
| 4 | 15:37:08 | ↹12745033.0000 | ↹4113209.4000 | ↹3691161.3000 | ↹9077840.4000 | 809890.3000 | 5.0000 |
| 5 | 15:37:48 | ↹12333232.0000 | ↹4037292.7000 | ↹3601234.1000 | ↹8883609.9000 | 821772.1200 | 10.0000 |
| x | | ↹12629886.0000 | ↹4116416.6000 | ↹3692625.1000 | ↹9107231.1000 | 815968.8900 | 4.5000 |
| %RSD | | ↹1.353 | ↹1.130 | ↹1.468 | ↹1.512 | 0.549 | 72.436 |

**CCB1** 06/17/2015 15:38:50

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 227085.8200 | 357.5077 | 65932.2960 | 10486.5940 | 1370.1126 | 1430.1227 | 34117.1960 | 71578.5950 | 732.5322 |
| 2 | 15:40:10 | 232515.0000 | 259.1707 | 59411.0280 | 9560.4810 | 1330.1061 | 1280.0983 | 32781.8520 | 67971.0780 | 700.0294 |
| 3 | 15:40:51 | 234992.2100 | 263.3375 | 54726.6120 | 7948.7892 | 965.0559 | 1015.0618 | 25458.8300 | 63911.6460 | 580.0202 |
| 4 | 15:41:31 | 238225.4300 | 214.1694 | 49712.8410 | 6207.3110 | 850.0434 | 895.0481 | 21948.8670 | 60589.4670 | 555.0185 |
| 5 | 15:42:11 | 238165.4200 | 146.6680 | 46099.6590 | 4911.4469 | 695.0290 | 655.0257 | 18340.1600 | 58159.7480 | 492.5146 |
| x | | 234196.7800 | 248.1707 | 55176.4870 | 7822.9244 | 1042.0694 | 1055.0713 | 26529.3810 | 64442.1070 | 612.0230 |
| %RSD | | 1.980 | 31.059 | 14.215 | 29.440 | 28.541 | 29.157 | 25.694 | 8.427 | 16.507 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 487679.1800 | 60.0002 | 1960.2305 | 2242.8018 | 3698.3205 | 1775.1891 | 122818.4400 | 1317.6042 | 1567.6474 |
| 2 | 15:40:10 | 497278.5400 | 87.5005 | 1547.6437 | 2007.7418 | 3600.7778 | 1522.6391 | 123034.0900 | 1312.6034 | 1482.6319 |
| 3 | 15:40:51 | 498800.5800 | 57.5002 | 1105.0733 | 2052.7528 | 3560.7606 | 1345.1086 | 121336.9800 | 1200.0864 | 1245.0930 |
| 4 | 15:41:31 | 506505.1000 | 57.5002 | 960.0553 | 1742.6822 | 3338.1685 | 1245.0930 | 119269.9500 | 1005.0606 | 987.5585 |
| 5 | 15:42:11 | 511657.2400 | 55.0002 | 1285.0991 | 1752.6843 | 3308.1565 | 960.0553 | 117396.1300 | 1100.0726 | 820.0404 |
| x | | 500384.1300 | 63.5003 | 1371.6204 | 1959.7326 | 3501.2368 | 1369.6170 | 120771.1200 | 1187.0854 | 1220.5942 |
| %RSD | | 1.837 | 21.311 | 28.827 | 10.857 | 4.867 | 22.259 | 1.997 | 11.432 | 26.052 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 420.0106 | 3913.4187 | 1707.6750 | 735.0324 | 330.0065 | 1445.1253 | 146.6680 | 147.5013 | 780130.9400 |
| 2 | 15:40:10 | 352.5075 | 3795.8643 | 1600.1536 | 637.5244 | 266.6709 | 1320.1046 | 160.0015 | 159.1682 | 786198.3400 |
| 3 | 15:40:51 | 285.0049 | 3413.1989 | 1497.6346 | 655.0257 | 203.3358 | 1389.2825 | 133.3344 | 142.5012 | 801451.2200 |
| 4 | 15:41:31 | 250.0038 | 3405.6958 | 1285.0991 | 672.5271 | 179.1686 | 1448.4592 | 154.1681 | 163.3349 | 808003.4100 |
| 5 | 15:42:11 | 200.0024 | 3140.5917 | 1360.1110 | 612.5225 | 161.6682 | 1405.1185 | 150.8347 | 147.5013 | 806560.6800 |
| x | | 301.5058 | 3533.7539 | 1490.1346 | 662.5264 | 228.1700 | 1401.6180 | 149.0013 | 152.0014 | 796468.9200 |
| %RSD | | 28.662 | 8.930 | 11.547 | 6.974 | 30.438 | 3.724 | 6.728 | 5.797 | 1.578 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 127.5010 | 247.5037 | 232.5032 | 137.5011 | 332.5066 | 899547.3800 | 468.7632 | 15.0000 | 452.5123 |
| 2 | 15:40:10 | 110.0007 | 255.0039 | 157.5015 | 115.0008 | 332.5066 | 910587.9200 | 391.2592 | 27.5000 | 332.5066 |
| 3 | 15:40:51 | 95.0005 | 192.5022 | 167.5017 | 117.5008 | 227.5031 | 922719.8700 | 398.7595 | 10.0000 | 338.7569 |
| 4 | 15:41:31 | 97.5006 | 187.5021 | 107.5007 | 95.0005 | 195.0023 | 923379.8200 | 348.7573 | 15.0000 | 331.2566 |
| 5 | 15:42:11 | 75.0003 | 135.0011 | 145.0013 | 95.0005 | 197.5023 | 928978.8200 | 221.2529 | 10.0000 | 181.2520 |
| x | | 101.0006 | 203.5026 | 162.0017 | 112.0008 | 257.0042 | 917042.7600 | 365.7584 | 15.5000 | 327.2569 |
| %RSD | | 19.221 | 24.146 | 28.085 | 15.894 | 27.276 | 1.293 | 25.028 | 46.187 | 29.461 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 226.2531 | 517.5161 | 797939.5200 | 50.0001 | 3040.5546 | 137.5011 | 217.5028 | 1265023.3000 | 1690.1714 |
| 2 | 15:40:10 | 193.7523 | 480.0138 | 801684.6500 | 57.5002 | 2320.3230 | 120.0009 | 190.0022 | 1298289.7000 | 1211.3380 |
| 3 | 15:40:51 | 141.2512 | 427.5110 | 815253.6200 | 52.5002 | 1712.6760 | 82.5004 | 162.5016 | 1291620.1000 | 902.5489 |
| 4 | 15:41:31 | 125.0009 | 355.0076 | 821851.9500 | 45.0001 | 1455.1270 | 80.0004 | 160.0015 | 1317114.1000 | 720.0311 |
| 5 | 15:42:11 | 103.7507 | 252.5038 | 815990.8000 | 42.5001 | 1225.0900 | 70.0003 | 92.5005 | 1315260.2000 | 603.7719 |
| x | | 158.0016 | 406.5105 | 810544.1100 | 49.5001 | 1950.7541 | 98.0006 | 164.5017 | 1297461.5000 | 1025.5723 |
| %RSD | | 32.037 | 25.957 | 1.260 | 12.058 | 37.610 | 29.717 | 28.298 | 1.630 | 42.575 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:39:30 | 4236.0764 | 942.5533 | 757.5344 | 1930.2235 | 921176.0100 | 0.0000 |
| 2 | 15:40:10 | 2712.9415 | 715.0307 | 622.5233 | 1465.1288 | 928906.3700 | 2.5000 |
| 3 | 15:40:51 | 2225.2971 | 665.0265 | 570.0195 | 1410.1193 | 940233.5600 | 2.5000 |
| 4 | 15:41:31 | 1722.6780 | 505.0153 | 467.5131 | 1117.5749 | 941484.9800 | 5.0000 |
| 5 | 15:42:11 | 1486.3825 | 420.0106 | 422.5107 | 1025.0630 | 938371.4200 | 0.0000 |
| x | | 2476.6751 | 649.5273 | 568.0202 | 1389.6219 | 934034.4700 | 2.0000 |
| %RSD | | 44.063 | 31.170 | 23.317 | 25.577 | 0.934 | 104.583 |

**PBS1-5x** 06/17/2015 15:43:13

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 236386.6700 | 71.6670 | 31095.4070 | 1995.2388 | 255.0039 | 280.0047 | 9097.4631 | 51408.0800 | 452.5123 |
| 2 | 15:44:34 | 242316.7200 | 88.3338 | 30746.6170 | 2075.2584 | 245.0036 | 260.0041 | 8259.0907 | 50542.8110 | 385.0089 |
| 3 | 15:45:14 | 241763.5000 | 79.1670 | 29978.8270 | 1790.1923 | 225.0030 | 255.0039 | 7543.4126 | 49919.0680 | 472.5134 |
| 4 | 15:45:54 | 245305.6200 | 85.0004 | 29005.3910 | 1790.1923 | 190.0022 | 205.0025 | 8614.4502 | 50809.4250 | 392.5092 |
| 5 | 15:46:35 | 246361.9400 | 73.3337 | 28862.3960 | 1720.1775 | 205.0025 | 260.0041 | 9625.5559 | 50344.1140 | 465.0130 |
| X | | 242426.8900 | 79.5004 | 29937.7280 | 1874.2119 | 224.0031 | 252.0039 | 8627.9945 | 50604.7000 | 433.5114 |
| %RSD | | 1.607 | 9.066 | 3.349 | 8.132 | 12.062 | 11.101 | 9.214 | 1.095 | 9.586 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 505305.4600 | 40.0001 | 930.0519 | 1490.1332 | 3215.6203 | 450.0122 | 113611.7100 | 997.5597 | 257.5040 |
| 2 | 15:44:34 | 515122.5000 | 47.5001 | 522.5164 | 1380.1143 | 3493.2320 | 445.0119 | 114227.5500 | 910.0497 | 232.5032 |
| 3 | 15:45:14 | 516556.0300 | 45.0001 | 400.0096 | 1395.1168 | 3273.1427 | 402.5097 | 115710.2900 | 962.5556 | 262.5041 |
| 4 | 15:45:54 | 519308.1700 | 87.5005 | 367.5081 | 1282.5987 | 3405.6958 | 420.0106 | 116453.0300 | 1002.5603 | 245.0036 |
| 5 | 15:46:35 | 521376.5200 | 57.5002 | 972.5568 | 1470.1297 | 3393.1907 | 372.5083 | 115692.5500 | 982.5579 | 187.5021 |
| X | | 515533.7300 | 55.5002 | 638.5286 | 1403.6185 | 3356.1763 | 418.0105 | 115139.0300 | 971.0566 | 237.0034 |
| %RSD | | 1.204 | 34.217 | 45.684 | 5.873 | 3.306 | 7.629 | 1.021 | 3.860 | 12.667 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 85.0004 | 2615.4104 | 1130.0766 | 890.0475 | 104.1673 | 1261.7622 | 142.5012 | 142.5012 | 790316.9300 |
| 2 | 15:44:34 | 70.0003 | 2667.9270 | 1050.0662 | 965.0559 | 83.3337 | 1350.9428 | 143.3346 | 145.8346 | 809119.2800 |
| 3 | 15:45:14 | 80.0004 | 2575.3979 | 1137.5776 | 940.0530 | 66.6669 | 1296.7676 | 158.3348 | 148.3347 | 805505.5800 |
| 4 | 15:45:54 | 85.0004 | 2562.8940 | 1127.5763 | 932.5522 | 65.0003 | 1326.7723 | 145.8346 | 156.6681 | 819947.3300 |
| 5 | 15:46:35 | 45.0001 | 2617.9111 | 1182.5839 | 922.5511 | 77.5004 | 1283.4322 | 159.1682 | 171.6684 | 815803.7500 |
| X | | 73.0003 | 2607.9081 | 1125.5761 | 930.0519 | 79.3337 | 1303.9354 | 149.8347 | 153.0014 | 808138.5700 |
| %RSD | | 23.024 | 1.586 | 4.242 | 2.939 | 19.950 | 2.706 | 5.497 | 7.631 | 1.416 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 62.5002 | 75.0003 | 72.5003 | 62.5002 | 132.5011 | 912309.3000 | 142.5012 | 2.5000 | 92.5005 |
| 2 | 15:44:34 | 75.0003 | 92.5005 | 82.5004 | 47.5001 | 90.0005 | 930269.0500 | 116.2508 | 10.0000 | 115.0008 |
| 3 | 15:45:14 | 52.5002 | 90.0005 | 65.0003 | 37.5001 | 117.5008 | 930940.7100 | 133.7511 | 2.5000 | 150.0014 |
| 4 | 15:45:54 | 40.0001 | 50.0001 | 70.0003 | 57.5002 | 102.5006 | 941925.8800 | 178.7519 | 17.5000 | 161.2516 |
| 5 | 15:46:35 | 80.0004 | 42.5001 | 100.0006 | 57.5002 | 132.5011 | 944088.8300 | 78.7504 | 5.0000 | 68.7503 |
| X | | 62.0002 | 70.0003 | 78.0004 | 52.5002 | 115.0008 | 931906.7500 | 130.0011 | 7.5000 | 117.5009 |
| %RSD | | 26.349 | 32.635 | 17.759 | 19.048 | 16.268 | 1.354 | 28.165 | 84.984 | 32.902 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 25.0000 | 102.5006 | 799246.2900 | 1847.7048 | 750.0338 | 32.5001 | 55.0002 | 1290363.5000 | 273.7545 |
| 2 | 15:44:34 | 30.0001 | 167.5017 | 817308.5300 | 2417.8507 | 590.0209 | 30.0001 | 45.0001 | 1294470.9000 | 303.7555 |
| 3 | 15:45:14 | 37.5001 | 112.5008 | 817792.7500 | 1892.7149 | 552.5183 | 15.0000 | 30.0001 | 1300645.7000 | 227.5031 |
| 4 | 15:45:54 | 32.5001 | 135.0011 | 830976.1800 | 2190.2878 | 457.5126 | 22.5000 | 37.5001 | 1309942.0000 | 228.7531 |
| 5 | 15:46:35 | 30.0001 | 115.0008 | 833638.4100 | 1715.1765 | 530.0169 | 40.0001 | 30.0001 | 1325579.6000 | 225.0030 |
| X | | 31.0001 | 126.5010 | 819792.4300 | 2012.7469 | 576.0205 | 28.0001 | 39.5001 | 1304200.3000 | 251.7539 |
| %RSD | | 14.650 | 20.376 | 1.669 | 14.180 | 18.856 | 34.233 | 27.001 | 1.077 | 14.073 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:43:54 | 723.7814 | 185.0021 | 175.0018 | 495.0147 | 928941.2000 | 2.5000 |
| 2 | 15:44:34 | 702.5296 | 197.5023 | 162.5016 | 450.0122 | 935380.2500 | 2.5000 |
| 3 | 15:45:14 | 593.7712 | 177.5019 | 160.0015 | 295.0052 | 928298.9500 | 0.0000 |
| 4 | 15:45:54 | 508.7655 | 167.5017 | 167.5017 | 400.0096 | 941265.9300 | 0.0000 |
| 5 | 15:46:35 | 560.0188 | 185.0021 | 150.0014 | 317.5061 | 954355.4400 | 0.0000 |
| X | | 617.7733 | 182.5020 | 163.0016 | 391.5095 | 937648.3600 | 1.0000 |
| %RSD | | 14.971 | 6.049 | 5.677 | 21.748 | 1.144 | 136.931 |

**LCS1-5x** 06/17/2015 15:47:37

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 242552.6000 | 1425.1218 | r1581299.2000 | 810584.4200 | 99854.6950 | 107838.2600 | 99184.2590 | 741621.8100 | 27470.2020 |
| 2 | 15:48:58 | 245354.5300 | 1441.7914 | r1616204.0000 | 817283.7700 | 103098.8400 | 109362.9400 | 99409.4180 | 757840.6100 | 28313.0160 |
| 3 | 15:49:38 | 242768.7600 | 1410.1193 | r1637871.8000 | 839315.5700 | 105118.8400 | 110067.1200 | 100120.3500 | 766531.6300 | 28277.8970 |
| 4 | 15:50:18 | 244532.5600 | 1345.1086 | r1647394.4000 | 831970.9800 | 105027.7000 | 110239.3700 | 99925.5360 | 773470.9800 | 29130.8270 |
| 5 | 15:50:59 | 246630.5500 | 1375.1134 | r1599342.5000 | 814758.5300 | 101782.8100 | 109763.1500 | 98572.0590 | 753158.3300 | 27929.2240 |
| x | | 244367.8000 | 1399.4509 | r1616422.4000 | 822782.6500 | 102976.5800 | 109454.1700 | 99442.3250 | 758524.6700 | 28224.2330 |
| %RSD | | 0.708 | 2.793 | r1.679 | 1.490 | 2.170 | 0.880 | 0.620 | 1.618 | 2.161 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 503463.8500 | 72.5003 | 31958.6640 | 13385.7420 | 33115.6680 | 8534.3679 | 650489.5300 | 14159.5190 | 8264.0957 |
| 2 | 15:48:58 | 512612.0700 | 42.5001 | 33143.2780 | 13678.7170 | 34498.7620 | 8601.9373 | 658817.1100 | 14838.1990 | 8689.5281 |
| 3 | 15:49:38 | 517712.0600 | 45.0001 | 32764.2840 | 13428.3100 | 35234.3300 | 8852.1992 | 675314.9700 | 14427.4780 | 8451.7838 |
| 4 | 15:50:18 | 519309.5000 | 37.5001 | 32897.3060 | 13388.2460 | 34860.2620 | 8754.5962 | 665357.3400 | 14715.4810 | 8639.4761 |
| 5 | 15:50:59 | 521065.4300 | 67.5003 | 32299.9760 | 13222.9830 | 34689.5520 | 8371.7030 | 659497.9300 | 14803.1360 | 8499.3321 |
| x | | 514832.5800 | 53.0002 | 32612.7020 | 13420.8000 | 34479.7150 | 8622.9607 | 661895.3800 | 14588.7630 | 8508.8432 |
| %RSD | | 1.378 | 29.907 | 1.463 | 1.224 | 2.347 | 2.180 | 1.388 | 1.982 | 1.975 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 1900.2166 | 11330.1970 | 5261.6606 | 3478.2257 | 1016.7287 | 2346.1636 | 623.3567 | 156.6681 | 797291.7000 |
| 2 | 15:48:58 | 2042.7503 | 12096.2730 | 5624.3974 | 3553.2574 | 1025.0630 | 2427.8536 | 610.8557 | 159.1682 | 801091.4800 |
| 3 | 15:49:38 | 2145.2761 | 11760.7930 | 5749.4827 | 3390.6897 | 1000.0600 | 2528.7169 | 642.5248 | 138.3345 | 807758.8100 |
| 4 | 15:50:18 | 1942.7264 | 12276.5360 | 5731.9707 | 3375.6836 | 996.7263 | 2497.0407 | 655.8591 | 166.6683 | 804206.1100 |
| 5 | 15:50:59 | 2005.2412 | 11998.6320 | 5599.3806 | 3233.1271 | 973.3902 | 2426.1865 | 600.0216 | 175.8352 | 812245.0300 |
| x | | 2007.2421 | 11892.4860 | 5593.3784 | 3406.1967 | 1002.3936 | 2445.1923 | 626.5236 | 159.3349 | 804518.6200 |
| %RSD | | 4.722 | 3.072 | 3.515 | 3.533 | 1.994 | 2.901 | 3.635 | 8.731 | 0.720 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 37.5001 | 55.0002 | 50.0001 | 42.5001 | 62.5002 | 915054.7600 | 5478.0500 | 97.5006 | 5210.3784 |
| 2 | 15:48:58 | 45.0001 | 62.5002 | 52.5002 | 35.0001 | 77.5004 | 928900.8000 | 5646.9126 | 85.0004 | 5489.3074 |
| 3 | 15:49:38 | 57.5002 | 62.5002 | 52.5002 | 25.0000 | 80.0004 | 925178.9100 | 5613.1398 | 95.0005 | 5516.8255 |
| 4 | 15:50:18 | 52.5002 | 40.0001 | 60.0002 | 42.5001 | 85.0004 | 930341.5000 | 5954.6267 | 62.5002 | 5471.7958 |
| 5 | 15:50:59 | 57.5002 | 60.0002 | 60.0002 | 22.5000 | 75.0003 | 940818.0900 | 5581.8688 | 57.5002 | 5281.6732 |
| x | | 50.0002 | 56.0002 | 55.0002 | 33.5001 | 76.0003 | 928058.8100 | 5654.9196 | 79.5004 | 5393.9961 |
| %RSD | | 17.321 | 16.882 | 8.504 | 28.220 | 11.058 | 1.002 | 3.166 | 23.258 | 2.565 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 1048.8160 | 2655.4230 | 805112.7000 | 1840.2032 | 6007.1644 | 6084.7206 | 11007.2650 | 1288332.2000 | 4452.4391 |
| 2 | 15:48:58 | 1116.3248 | 2692.9350 | 808800.4400 | 1552.6446 | 6149.7683 | 6422.4739 | 10974.7220 | 1302944.1000 | 4517.4741 |
| 3 | 15:49:38 | 1133.8271 | 2842.9849 | 822113.4500 | 2712.9415 | 6312.3899 | 6532.5595 | 11147.4510 | 1300488.8000 | 4503.7167 |
| 4 | 15:50:18 | 1116.3248 | 2617.9111 | 824872.1100 | 2362.8349 | 5949.6231 | 6612.6226 | 11122.4180 | 1288459.9000 | 4718.8357 |
| 5 | 15:50:59 | 1151.3295 | 2640.4182 | 821147.3000 | 1772.6885 | 5982.1464 | 6207.3110 | 10832.0350 | 1310154.3000 | 4388.6553 |
| x | | 1113.3244 | 2689.9345 | 816409.2000 | 2048.2626 | 6080.2184 | 6371.9375 | 11016.7780 | 1298075.9000 | 4516.2242 |
| %RSD | | 3.492 | 3.339 | 1.082 | 23.230 | 2.477 | 3.473 | 1.150 | 0.734 | 2.747 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:48:18 | 10738.1640 | 3505.7373 | 3345.6715 | 7756.1078 | 923478.6700 | 0.0000 |
| 2 | 15:48:58 | 11223.8030 | 3488.2299 | 3510.7394 | 8013.8515 | 928882.6900 | 2.5000 |
| 3 | 15:49:38 | 11041.0590 | 3648.2984 | 3345.6715 | 7585.9512 | 930758.1500 | 2.5000 |
| 4 | 15:50:18 | 11132.4310 | 3578.2681 | 3283.1466 | 7858.7038 | 936200.1100 | 2.5000 |
| 5 | 15:50:59 | 10830.7840 | 3578.2681 | 3263.1388 | 7585.9512 | 943453.8400 | 2.5000 |
| x | | 10993.2480 | 3559.7603 | 3349.6735 | 7760.1131 | 932554.6900 | 2.0000 |
| %RSD | | 1.855 | 1.807 | 2.905 | 2.365 | 0.815 | 55.902 |

MF9M21-5x 06/17/2015 15:52:01

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 222886.3600 | 777.5363 | 83304.3060 | 1186670.2000 | 148221.5600 | 160067.6800 | ↹30796318.0000 | ↹1418409.8000 | 87779.8960 |
| 2 | 15:53:22 | 226260.4900 | 778.3697 | 84304.2870 | ↹1239087.0000 | 151754.2900 | 160821.9900 | ↹31429561.0000 | ↹1447262.7000 | 90759.0560 |
| 3 | 15:54:02 | 223386.1500 | 710.0303 | 84662.8950 | ↹1248760.9000 | 154280.0400 | 164507.9000 | ↹31648225.0000 | ↹1446898.9000 | 91512.2250 |
| 4 | 15:54:42 | 224337.8800 | 750.8672 | 83410.3590 | 1222405.0000 | 151489.5400 | 159303.2400 | ↹31102453.0000 | ↹1441793.2000 | 89917.5060 |
| 5 | 15:55:23 | 225532.8200 | 726.6984 | 82152.9600 | ↹1205299.6000 | 149987.7400 | 158253.5200 | ↹30768626.0000 | ↹1404836.4000 | 88244.7680 |
| X | | 224480.7400 | 748.7003 | 83566.9610 | ↹1220444.5000 | 151146.6400 | 160590.8600 | ↹31149037.0000 | ↹1431840.2000 | 89642.6900 |
| %RSD | | 0.631 | 4.060 | 1.172 | ↹2.058 | 1.487 | 1.486 | ↹1.243 | ↹1.340 | 1.785 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 505983.5500 | 21612.9910 | 143777.2000 | 172798.1700 | ↹2611903.1000 | ↹1960031.3000 | ↹45272324.0000 | 1107730.7000 | 41282.0000 |
| 2 | 15:53:22 | 510807.4100 | 22287.2640 | 144308.7800 | 175524.2600 | ↹2679061.8000 | 1994282.6000 | ↹45954456.0000 | 1122653.8000 | 42045.8040 |
| 3 | 15:54:02 | 512229.5900 | 22334.8910 | 147122.3400 | 176525.0700 | ↹2675712.3000 | ↹1994056.6000 | ↹46248369.0000 | 1126434.1000 | 42126.2090 |
| 4 | 15:54:42 | 514022.6000 | 21502.7060 | 144484.2800 | 174028.3700 | ↹2638392.6000 | ↹1974051.6000 | ↹45395811.0000 | 1117084.6000 | 42111.1330 |
| 5 | 15:55:23 | 511764.8000 | 21179.3800 | 142548.8700 | 173004.8900 | ↹2633800.9000 | ↹1957436.5000 | ↹45358524.0000 | 1106781.0000 | 41138.7940 |
| X | | 510961.5900 | 21783.4460 | 144448.2900 | 174376.1500 | ↹2647774.1000 | ↹1975971.7000 | ↹45645897.0000 | 1116136.8000 | 41740.7880 |
| %RSD | | 0.591 | 2.330 | 1.160 | 0.926 | ↹1.090 | ↹0.900 | ↹0.944 | 0.786 | 1.169 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 15381.6830 | 42204.1010 | 20262.1030 | 27786.2470 | 6901.1897 | 1330.1061 | 191.6689 | 178.3352 | 817886.3000 |
| 2 | 15:53:22 | 15950.2500 | 42862.4490 | 20342.2980 | 27886.5820 | 7000.4391 | 1277.5979 | 215.0028 | 144.1679 | 822171.2600 |
| 3 | 15:54:02 | 15940.2310 | 42465.4240 | 20111.7400 | 28029.5600 | 6988.7627 | 1276.7645 | 178.3352 | 172.5018 | 826430.7800 |
| 4 | 15:54:42 | 15619.6250 | 42593.5750 | 20630.5050 | 28358.1690 | 6940.3889 | 1276.7645 | 197.5023 | 156.6681 | 817181.9700 |
| 5 | 15:55:23 | 15499.4000 | 41842.2840 | 19926.2950 | 27573.0410 | 6771.0831 | 1224.2566 | 170.8351 | 183.3354 | 822705.3000 |
| X | | 15678.2380 | 42393.5660 | 20254.5880 | 27926.7200 | 6920.3727 | 1277.0979 | 190.6689 | 167.0017 | 821275.1200 |
| %RSD | | 1.645 | 0.917 | 1.300 | 1.049 | 1.335 | 2.930 | 9.028 | 9.718 | 0.462 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 11042.3110 | 525.0165 | 2335.3272 | 282.5048 | 727.5318 | 892651.6500 | 220.0029 | 87.5005 | 151.2514 |
| 2 | 15:53:22 | 11345.2180 | 440.0116 | 2230.2984 | 375.0084 | 817.5401 | 898342.1800 | 205.0025 | 90.0005 | 166.2517 |
| 3 | 15:54:02 | 10709.3770 | 557.5187 | 2490.3721 | 350.0074 | 760.0347 | 902352.7400 | 246.2536 | 82.5004 | 197.5023 |
| 4 | 15:54:42 | 10529.1480 | 497.5149 | 2260.3065 | 310.0058 | 792.5377 | 899980.6200 | 255.0039 | 75.0003 | 187.5021 |
| 5 | 15:55:23 | 10842.0480 | 532.5170 | 2482.8698 | 270.0044 | 825.0408 | 904189.2200 | 213.7527 | 107.5007 | 152.5014 |
| X | | 10893.6200 | 510.5157 | 2359.8348 | 317.5061 | 784.5370 | 899503.2800 | 228.0031 | 88.5005 | 171.0018 |
| %RSD | | 2.886 | 8.784 | 5.167 | 13.997 | 5.195 | 0.493 | 9.453 | 13.636 | 12.160 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 108.7507 | 310.0058 | 789529.8000 | 215.0028 | 337.5068 | 28656.6880 | 50733.9670 | 1256883.6000 | 357.5077 |
| 2 | 15:53:22 | 128.7510 | 265.0042 | 793938.0600 | 260.0041 | 367.5081 | 29404.2850 | 52185.3890 | 1255857.2000 | 372.5083 |
| 3 | 15:54:02 | 126.2510 | 222.5030 | 795474.7600 | 237.5034 | 305.0056 | 29790.6540 | 52210.5460 | 1253984.1000 | 358.7577 |
| 4 | 15:54:42 | 116.2508 | 247.5037 | 799754.2300 | 240.0035 | 280.0047 | 29093.1960 | 51840.7480 | 1272096.0000 | 328.7565 |
| 5 | 15:55:23 | 102.5006 | 202.5025 | 810152.8200 | 227.5031 | 320.0061 | 28644.1450 | 51226.9700 | 1278927.8000 | 393.7593 |
| X | | 116.5008 | 249.5038 | 797769.9300 | 236.0034 | 322.0063 | 29117.7940 | 51639.5240 | 1263549.7000 | 362.2579 |
| %RSD | | 9.609 | 16.577 | 0.981 | 7.051 | 10.262 | 1.693 | 1.246 | 0.889 | 6.554 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:52:42 | 935.0525 | 66194.3620 | 54228.3710 | 135899.1500 | 886277.0900 | 2.5000 |
| 2 | 15:53:22 | 868.7953 | 66819.3200 | 55695.4990 | 137815.2400 | 886224.4100 | 2.5000 |
| 3 | 15:54:02 | 943.8034 | 66940.2850 | 54912.8310 | 138453.1800 | 887537.4900 | 2.5000 |
| 4 | 15:54:42 | 821.2905 | 65776.0690 | 54517.7500 | 135708.5800 | 883718.0300 | 2.5000 |
| 5 | 15:55:23 | 907.5494 | 64979.8590 | 54062.2970 | 135383.3600 | 895160.5800 | 7.5000 |
| X | | 895.2982 | 66141.9790 | 54683.3500 | 136651.9000 | 887783.5200 | 3.5000 |
| %RSD | | 5.658 | 1.215 | 1.191 | 1.013 | 0.490 | 63.888 |

MF9M22-5x 06/17/2015 15:56:24

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 221073.1800 | 460.8461 | 90637.7460 | 1153009.7000 | 142386.1200 | 154422.6500 | τ38717824.0000 | τ1717727.5000 | 50253.5700 |
| 2 | 15:57:45 | 226358.0900 | 474.1802 | 92106.2160 | 1164276.8000 | 147962.0100 | 156292.0200 | τ39363411.0000 | τ1761232.7000 | 51931.3090 |
| 3 | 15:58:25 | 222266.8100 | 471.6800 | 94634.3050 | 1200559.7000 | 148287.7200 | 159726.2200 | τ39562852.0000 | τ1779999.7000 | 52303.6270 |
| 4 | 15:59:06 | 223084.0500 | 472.5134 | 94358.7060 | 1200134.5000 | 149621.2400 | 159797.5700 | τ39877419.0000 | τ1783612.6000 | 52567.7810 |
| 5 | 15:59:46 | 225793.9200 | 494.1813 | 93592.6400 | τ1225311.2000 | 149066.4300 | 157550.3800 | τ39899212.0000 | τ1788755.9000 | 52016.8400 |
| x | | 223715.2100 | 474.6802 | 93065.9230 | τ1188658.4000 | 147464.7000 | 157557.7600 | τ39484143.0000 | τ1766265.7000 | 51814.6250 |
| %RSD | | 1.019 | 2.549 | 1.800 | τ2.482 | 1.975 | 1.459 | τ1.224 | τ1.645 | 1.752 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 498759.4800 | 31471.8170 | 104187.2500 | 69231.3890 | 1205991.6000 | 607319.6800 | τ21176547.0000 | 511330.5700 | 25127.8270 |
| 2 | 15:57:45 | 501269.8400 | 31725.2750 | 104334.0700 | 69057.4550 | 1220985.2000 | 626025.7300 | τ21401121.0000 | 514688.1000 | 25401.1540 |
| 3 | 15:58:25 | 507047.9100 | 32678.9490 | 105331.5000 | 70716.2800 | 1235406.9000 | 628865.5500 | τ21779702.0000 | 523148.8300 | 26334.0430 |
| 4 | 15:59:06 | 511476.6400 | 32460.5990 | 106453.1200 | 69866.6580 | 1245539.6000 | 629622.1000 | τ21661615.0000 | 526960.6000 | 25947.8350 |
| 5 | 15:59:46 | 511953.3700 | 32134.3380 | 105134.0300 | 71631.5470 | 1246660.1000 | 632115.6700 | τ21800969.0000 | 523438.7100 | 25982.9440 |
| x | | 506101.4500 | 32094.1950 | 105088.0000 | 70100.6660 | 1230916.7000 | 624789.7400 | τ21563991.0000 | 519913.3600 | 25758.7610 |
| %RSD | | 1.174 | 1.559 | 0.865 | 1.533 | 1.408 | 1.601 | τ1.246 | 1.267 | 1.885 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 12096.2730 | 31301.1760 | 15321.5720 | 16010.3650 | 1274.2641 | 1210.0879 | 166.6683 | 143.3346 | 810625.6600 |
| 2 | 15:57:45 | 12123.8130 | 31353.8730 | 15316.5630 | 16315.9570 | 1183.4174 | 1200.9199 | 192.5022 | 160.8349 | 810246.2900 |
| 3 | 15:58:25 | 11976.0990 | 32151.9050 | 15524.4470 | 16526.3710 | 1257.5949 | 1189.2515 | 185.0021 | 160.0015 | 834878.8500 |
| 4 | 15:59:06 | 12737.2270 | 32184.5310 | 15702.2800 | 16749.3150 | 1290.0999 | 1162.5811 | 196.6690 | 149.1680 | 832320.9700 |
| 5 | 15:59:46 | 12271.5290 | 31931.0590 | 15246.4340 | 16516.3510 | 1306.7691 | 1162.5811 | 168.3350 | 156.6681 | 830631.7500 |
| x | | 12240.9880 | 31784.5090 | 15422.2590 | 16423.6720 | 1262.4291 | 1185.0843 | 181.8353 | 154.0014 | 823740.7000 |
| %RSD | | 2.423 | 1.349 | 1.218 | 1.688 | 3.786 | 1.842 | 7.561 | 4.891 | 1.486 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 11956.0710 | 187.5021 | 2267.8085 | 125.0009 | 330.0065 | 893239.9600 | 198.7524 | 92.5005 | 146.2513 |
| 2 | 15:57:45 | 12106.2870 | 217.5028 | 2207.7924 | 120.0009 | 262.5041 | 893684.0000 | 233.7533 | 75.0003 | 113.7508 |
| 3 | 15:58:25 | 12396.7140 | 200.0024 | 2297.8168 | 125.0009 | 332.5066 | 893190.0100 | 252.5038 | 97.5006 | 152.5014 |
| 4 | 15:59:06 | 12579.4870 | 202.5025 | 2260.3065 | 112.5008 | 352.5075 | 893356.5200 | 233.7533 | 82.5004 | 176.2519 |
| 5 | 15:59:46 | 11978.6030 | 225.0030 | 2315.3216 | 100.0006 | 265.0042 | 898900.3300 | 237.5034 | 95.0005 | 168.7517 |
| x | | 12203.4320 | 206.5026 | 2269.8092 | 116.5008 | 308.5058 | 894474.1600 | 231.2532 | 88.5005 | 151.5014 |
| %RSD | | 2.244 | 7.193 | 1.816 | 9.054 | 13.543 | 0.277 | 8.538 | 10.682 | 16.046 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 51.2502 | 102.5006 | 779961.0900 | 277.5046 | 245.0036 | 29436.9000 | 50414.5380 | 1241633.5000 | 403.7598 |
| 2 | 15:57:45 | 33.7501 | 115.0008 | 785118.2800 | 260.0041 | 167.5017 | 29710.3680 | 52650.8030 | 1253085.2000 | 403.7598 |
| 3 | 15:58:25 | 50.0001 | 130.0010 | 796652.1600 | 237.5034 | 160.0015 | 30161.9860 | 52909.9360 | 1260781.9000 | 396.2594 |
| 4 | 15:59:06 | 47.5001 | 100.0006 | 796989.7600 | 295.0052 | 200.0024 | 30505.7340 | 53692.4170 | 1272840.3000 | 397.5095 |
| 5 | 15:59:46 | 56.2502 | 100.0006 | 799825.6100 | 290.0051 | 167.5017 | 30633.7020 | 54281.2130 | 1268881.8000 | 377.5086 |
| x | | 47.7501 | 109.5007 | 791709.3800 | 272.0045 | 188.0022 | 30089.7380 | 52789.7810 | 1259444.5000 | 395.7594 |
| %RSD | | 17.697 | 11.907 | 1.093 | 8.656 | 18.839 | 1.698 | 2.796 | 0.995 | 2.723 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 15:57:05 | 983.8081 | 21597.9520 | 18207.3690 | 45757.7830 | 871908.3300 | 0.0000 |
| 2 | 15:57:45 | 1036.3144 | 22031.5850 | 18302.5770 | 46152.4500 | 882696.5600 | 0.0000 |
| 3 | 15:58:25 | 968.8063 | 22264.7030 | 18615.7700 | 47062.5190 | 887691.4100 | 2.5000 |
| 4 | 15:59:06 | 975.0570 | 22941.5350 | 19029.2020 | 48236.7040 | 899372.4200 | 2.5000 |
| 5 | 15:59:46 | 955.0547 | 23483.0410 | 18615.7700 | 47261.1380 | 896598.5400 | 2.5000 |
| x | | 983.8081 | 22463.7630 | 18554.1370 | 46894.1190 | 887653.4500 | 1.5000 |
| %RSD | | 3.168 | 3.334 | 1.740 | 2.080 | 1.247 | 91.287 |

**MF9M23-5x** 06/17/2015 16:00:48

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 220209.9400 | 613.3559 | 100636.5200 | 1018321.0000 | 128467.6600 | 133907.2900 | ↹39510598.0000 | ↹1636136.5000 | 34167.4010 |
| 2 | 16:02:08 | 222790.5200 | 588.3541 | 102734.3800 | 1039034.3000 | 128812.9300 | 137723.7400 | ↹40277233.0000 | ↹1671324.5000 | 34739.7600 |
| 3 | 16:02:49 | 223069.5000 | 590.8543 | 102605.3100 | 1056109.1000 | 129305.4700 | 139660.5800 | ↹40485019.0000 | ↹1686114.8000 | 35043.5280 |
| 4 | 16:03:29 | 223374.1700 | 522.5164 | 102440.8000 | 1047028.2000 | 131199.7400 | 138455.7200 | ↹40473409.0000 | ↹1686114.8000 | 34769.8860 |
| 5 | 16:04:09 | 225118.5100 | 562.5190 | 100216.5000 | 1027479.6000 | 127756.8600 | 136641.1400 | ↹39614075.0000 | ↹1628258.4000 | 33467.0680 |
| x | | 222912.5300 | 575.5199 | 101726.7000 | 1037594.4000 | 129108.5300 | 137277.7000 | ↹40072067.0000 | ↹1661589.8000 | 34437.5290 |
| %RSD | | 0.791 | 6.025 | 1.180 | 1.452 | 1.005 | 1.589 | ↹1.183 | ↹1.664 | 1.827 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 503124.2400 | 30154.4590 | 98868.0350 | 69216.2650 | 1131510.2000 | 202897.8400 | ↹20089623.0000 | 482661.8500 | 17586.0370 |
| 2 | 16:02:08 | 507355.8300 | 31464.2880 | 99981.1980 | 69440.6200 | 1165664.7000 | 204050.4800 | ↹20272616.0000 | 488227.4300 | 17510.8790 |
| 3 | 16:02:49 | 505752.6500 | 32159.4340 | 101461.4300 | 71361.7470 | 1172908.4000 | 207104.4500 | ↹20719030.0000 | 497452.2100 | 18422.8420 |
| 4 | 16:03:29 | 510236.4700 | 31870.8290 | 100107.7000 | 70675.9400 | 1159856.9000 | 205077.7400 | ↹20495796.0000 | 493165.8700 | 18054.5370 |
| 5 | 16:04:09 | 506080.4300 | 30849.4960 | 99032.4700 | 68772.6140 | 1142881.4000 | 200426.6100 | ↹19985608.0000 | 482455.3900 | 17743.8710 |
| x | | 506509.9200 | 31299.7010 | 99890.1670 | 69893.4370 | 1154564.3000 | 203911.4200 | ↹20312535.0000 | 488792.5500 | 17863.6330 |
| %RSD | | 0.511 | 2.579 | 1.039 | 1.549 | 1.472 | 1.220 | ↹1.471 | 1.342 | 2.104 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 10761.9450 | 29800.6900 | 14475.0610 | 17901.7080 | 1418.4540 | 1170.0821 | 180.0019 | 162.5016 | 806431.5300 |
| 2 | 16:02:08 | 10684.3450 | 31060.2770 | 14542.6780 | 18117.1730 | 1364.2783 | 1167.5818 | 170.8351 | 139.1678 | 813820.7000 |
| 3 | 16:02:49 | 10471.5750 | 30049.0790 | 14785.6050 | 18573.1750 | 1386.7820 | 1160.0807 | 164.1683 | 157.5015 | 825064.8600 |
| 4 | 16:03:29 | 10408.9970 | 30345.1490 | 14743.0300 | 18087.1070 | 1413.4532 | 1202.5868 | 185.8354 | 143.3346 | 818722.7600 |
| 5 | 16:04:09 | 10308.8720 | 30081.6970 | 14505.1130 | 18142.2270 | 1412.6197 | 1169.2487 | 175.0018 | 139.1678 | 817597.4100 |
| x | | 10527.1470 | 30267.3780 | 14610.2970 | 18164.2780 | 1399.1175 | 1173.9160 | 175.1685 | 148.3347 | 816327.4500 |
| %RSD | | 1.806 | 1.597 | 0.982 | 1.362 | 1.648 | 1.406 | 4.750 | 7.368 | 0.840 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 12068.7330 | 275.0045 | 2407.8478 | 175.0018 | 397.5095 | 882290.4900 | 161.2516 | 85.0004 | 123.7509 |
| 2 | 16:02:08 | 12754.7540 | 245.0036 | 2385.3413 | 195.0023 | 430.0111 | 889261.3000 | 145.0013 | 85.0004 | 98.7506 |
| 3 | 16:02:49 | 12662.1120 | 245.0036 | 2347.8307 | 182.5020 | 427.5110 | 903238.9800 | 178.7519 | 100.0006 | 106.2507 |
| 4 | 16:03:29 | 12667.1200 | 275.0045 | 2442.8580 | 175.0018 | 410.0101 | 899269.6700 | 195.0023 | 90.0005 | 103.7507 |
| 5 | 16:04:09 | 12304.0770 | 257.5040 | 2292.8154 | 152.5014 | 450.0122 | 892832.0300 | 166.2517 | 102.5006 | 103.7507 |
| x | | 12491.3590 | 259.5041 | 2375.3386 | 176.0019 | 423.0108 | 893378.4900 | 169.2517 | 92.5005 | 107.2507 |
| %RSD | | 2.345 | 5.796 | 2.426 | 8.791 | 4.754 | 0.923 | 11.110 | 8.964 | 8.968 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 30.0001 | 87.5005 | 785162.1400 | 212.5027 | 195.0023 | 23688.6210 | 41070.9610 | 1242710.2000 | 385.0089 |
| 2 | 16:02:08 | 31.2501 | 85.0004 | 785422.5500 | 177.5019 | 155.0014 | 23849.0780 | 42342.3000 | 1246449.2000 | 386.2590 |
| 3 | 16:02:49 | 23.7500 | 77.5004 | 786595.8500 | 165.0016 | 157.5015 | 24435.7740 | 42279.4820 | 1270529.3000 | 377.5086 |
| 4 | 16:03:29 | 26.2500 | 90.0005 | 788630.3200 | 190.0022 | 177.5019 | 24302.8860 | 41779.4700 | 1259928.6000 | 403.7598 |
| 5 | 16:04:09 | 40.0001 | 115.0008 | 790001.5200 | 227.5031 | 122.5009 | 23440.4210 | 41297.0740 | 1249199.0000 | 400.0096 |
| x | | 30.2501 | 91.0005 | 787162.4800 | 194.5023 | 161.5016 | 23943.3560 | 41753.8570 | 1253763.2000 | 390.5092 |
| %RSD | | 20.537 | 15.614 | 0.266 | 13.089 | 16.837 | 1.745 | 1.364 | 0.906 | 2.814 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:01:28 | 966.3060 | 12261.5140 | 10023.5250 | 25877.6170 | 880568.0500 | 2.5000 |
| 2 | 16:02:08 | 881.2966 | 12304.0770 | 10046.0520 | 25977.9280 | 877446.9100 | 2.5000 |
| 3 | 16:02:49 | 886.2971 | 12664.6160 | 10098.6150 | 26145.9520 | 893486.9600 | 5.0000 |
| 4 | 16:03:29 | 916.3004 | 12451.7960 | 9858.3278 | 26050.6550 | 883483.7900 | 2.5000 |
| 5 | 16:04:09 | 865.0449 | 12679.6390 | 10021.0220 | 25423.7230 | 888294.6500 | 0.0000 |
| x | | 903.0490 | 12472.3280 | 10009.5080 | 25895.1750 | 884656.0700 | 2.5000 |
| %RSD | | 4.421 | 1.569 | 0.900 | 1.086 | 0.718 | 70.711 |

MF9M24-5x 06/17/2015 16:05:11

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 221673.8200 | 515.8493 | 109231.2300 | τ1337651.6000 | 159247.1800 | 170496.4800 | τ43311684.0000 | τ2167908.4000 | 22718.4250 |
| 2 | 16:06:32 | 223649.7500 | 529.1835 | 109664.3600 | τ1338955.6000 | 162723.3700 | 172696.0800 | τ43707313.0000 | τ2193148.5000 | 22851.2880 |
| 3 | 16:07:12 | 223888.5300 | 508.3488 | 109747.9500 | τ1358232.3000 | 164110.1700 | 174554.2000 | τ43515248.0000 | τ2186838.5000 | 22615.6460 |
| 4 | 16:07:52 | 223433.2200 | 539.1841 | 110191.2400 | τ1327053.0000 | 162269.6500 | 171016.9900 | τ43017868.0000 | τ2210748.7000 | 23016.7420 |
| 5 | 16:08:32 | 222654.4500 | 460.0127 | 106017.6200 | τ1294474.7000 | 156903.3400 | 166007.2000 | τ42127167.0000 | τ2114104.0000 | 22354.9440 |
| x | | 223059.9600 | 510.5157 | 108970.4800 | τ1331273.4000 | 161050.7400 | 170954.1900 | τ43135856.0000 | τ2174549.6000 | 22711.4090 |
| %RSD | | 0.405 | 6.001 | 1.547 | τ1.761 | 1.813 | 1.865 | τ1.435 | τ1.706 | 1.099 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 501795.0800 | 32332.6020 | 128828.1600 | 79477.1990 | 1407770.0000 | 322346.1300 | τ24890818.0000 | 595012.6800 | 22054.1450 |
| 2 | 16:06:32 | 500235.3700 | 32407.8940 | 130887.3800 | 80499.4410 | 1425139.5000 | 325482.0600 | τ24990662.0000 | 606924.9100 | 22723.4390 |
| 3 | 16:07:12 | 508450.8900 | 33308.9360 | 131075.3000 | 80832.6430 | 1436965.9000 | 323213.7900 | τ25058523.0000 | 602946.0800 | 22883.8770 |
| 4 | 16:07:52 | 508498.6800 | 32166.9630 | 129871.6700 | 79250.0510 | 1421849.6000 | 322652.6600 | τ24794481.0000 | 592277.7900 | 22873.8500 |
| 5 | 16:08:32 | 507317.3400 | 31705.1990 | 125878.6000 | 77352.3450 | 1385115.0000 | 315119.9800 | τ24226472.0000 | 584796.1200 | 22059.1580 |
| x | | 505259.4700 | 32384.3190 | 129308.2200 | 79482.3360 | 1415368.0000 | 321762.9200 | τ24792191.0000 | 596391.5200 | 22518.8940 |
| %RSD | | 0.780 | 1.805 | 1.637 | 1.717 | 1.403 | 1.216 | τ1.338 | 1.469 | 1.895 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 14700.4550 | 31145.5940 | 14773.0830 | 20612.9620 | 2111.9342 | 1210.9213 | 188.3355 | 153.3347 | 812654.7300 |
| 2 | 16:06:32 | 14462.5390 | 31885.8860 | 15296.5260 | 21044.0380 | 2056.9205 | 1212.5882 | 175.8352 | 149.1680 | 811356.9500 |
| 3 | 16:07:12 | 14978.4490 | 32001.3270 | 15366.6550 | 21349.8140 | 2070.2571 | 1124.2425 | 170.0017 | 175.0018 | 809762.4800 |
| 4 | 16:07:52 | 14445.0090 | 31178.2160 | 14790.6140 | 20891.1540 | 2167.7819 | 1185.9177 | 167.5017 | 142.5012 | 822317.1500 |
| 5 | 16:08:32 | 14374.8880 | 30606.1010 | 14670.4020 | 20377.3840 | 2018.5778 | 1172.5825 | 172.5018 | 165.0016 | 812322.0200 |
| x | | 14592.2680 | 31363.4250 | 14979.4560 | 20855.0700 | 2085.0943 | 1181.2504 | 174.8352 | 157.0015 | 813682.6600 |
| %RSD | | 1.702 | 1.842 | 2.174 | 1.808 | 2.734 | 3.055 | 4.663 | 8.262 | 0.609 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 13611.1070 | 392.5092 | 2670.4278 | 287.5050 | 687.5284 | 883984.1600 | 187.5021 | 120.0009 | 143.7512 |
| 2 | 16:06:32 | 13606.0980 | 357.5077 | 2707.9399 | 295.0052 | 635.0242 | 875009.5100 | 203.7525 | 82.5004 | 142.5012 |
| 3 | 16:07:12 | 13405.7740 | 385.0089 | 2462.8639 | 260.0041 | 587.5207 | 882800.5000 | 203.7525 | 132.5011 | 155.0014 |
| 4 | 16:07:52 | 13490.9110 | 400.0096 | 2642.9190 | 237.5034 | 627.5236 | 883108.1800 | 227.5031 | 92.5005 | 145.0013 |
| 5 | 16:08:32 | 13140.3520 | 367.5081 | 2512.8788 | 225.0030 | 632.5240 | 895454.8200 | 197.5023 | 125.0009 | 120.0009 |
| x | | 13450.8490 | 380.5087 | 2599.4059 | 261.0041 | 634.0242 | 884071.4300 | 204.0025 | 110.5008 | 141.2512 |
| %RSD | | 1.439 | 4.632 | 4.073 | 11.665 | 5.616 | 0.828 | 7.216 | 19.685 | 9.111 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 56.2502 | 117.5008 | 783608.0800 | 287.5050 | 165.0016 | 28789.6450 | 51073.5320 | 1253989.9000 | 426.2609 |
| 2 | 16:06:32 | 71.2503 | 145.0013 | 781692.6000 | 295.0052 | 107.5007 | 29098.2140 | 51443.2960 | 1244768.6000 | 403.7598 |
| 3 | 16:07:12 | 58.7502 | 130.0010 | 787286.7500 | 282.5048 | 140.0012 | 29336.5470 | 51018.1950 | 1232923.8000 | 426.2609 |
| 4 | 16:07:52 | 56.2502 | 97.5006 | 782114.5700 | 245.0036 | 130.0010 | 29271.3180 | 50771.6960 | 1248785.9000 | 446.2620 |
| 5 | 16:08:32 | 75.0003 | 162.5016 | 786697.2900 | 237.5034 | 145.0013 | 28032.0690 | 49866.2540 | 1252848.3000 | 385.0089 |
| x | | 63.5002 | 130.5011 | 784279.8600 | 269.5044 | 137.5012 | 28905.5590 | 50834.5950 | 1246663.3000 | 417.5105 |
| %RSD | | 14.086 | 19.128 | 0.330 | 9.760 | 15.320 | 1.841 | 1.165 | 0.682 | 5.649 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:05:51 | 1042.5652 | 19279.7770 | 15479.3630 | 40515.7530 | 878866.7300 | 0.0000 |
| 2 | 16:06:32 | 1116.3248 | 19555.4180 | 15950.2500 | 40751.9000 | 877548.0200 | 2.5000 |
| 3 | 16:07:12 | 1072.5690 | 19467.7130 | 15877.6120 | 40362.5120 | 872421.8900 | 5.0000 |
| 4 | 16:07:52 | 1065.0681 | 19640.6180 | 15654.6900 | 40189.1770 | 881980.0700 | 0.0000 |
| 5 | 16:08:32 | 1070.0687 | 18956.5370 | 15441.7940 | 39686.7780 | 890542.9300 | 2.5000 |
| x | | 1073.3192 | 19380.0120 | 15680.7420 | 40301.2240 | 880271.9300 | 2.0000 |
| %RSD | | 2.498 | 1.403 | 1.460 | 0.995 | 0.761 | 104.583 |

MF9M25-5x 06/17/2015 16:09:35

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 221505.2600 | 510.0156 | 117368.2400 | τ1269958.1000 | 150832.7900 | 163161.8200 | τ36990366.0000 | τ1420078.2000 | 63601.7890 |
| 2 | 16:10:55 | 224023.7600 | 497.5149 | 118359.6100 | τ1275103.3000 | 157397.5300 | 163890.9200 | τ37275875.0000 | τ1456846.9000 | 65461.1030 |
| 3 | 16:11:35 | 227060.1400 | 478.3471 | 119254.7400 | τ1280817.5000 | 156215.6000 | 164630.2800 | τ36966176.0000 | τ1448291.4000 | 64503.6810 |
| 4 | 16:12:15 | 223506.8200 | 480.8472 | 119838.0200 | 1257803.1000 | 154183.2700 | 167027.2800 | τ36890950.0000 | τ1454275.2000 | 63951.9530 |
| 5 | 16:12:56 | 223419.5300 | 454.1790 | 115205.8800 | 1208820.9000 | 148603.2700 | 160179.8000 | τ35806582.0000 | τ1397836.4000 | 62581.6080 |
| x | | 223903.1000 | 484.1808 | 118005.3000 | τ1258500.6000 | 153446.4900 | 163778.0200 | τ36785990.0000 | τ1435465.6000 | 64020.0270 |
| %RSD | | 0.897 | 4.370 | 1.545 | τ2.308 | 2.397 | 1.515 | τ1.540 | τ1.786 | 1.668 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 498302.0500 | 15131.2250 | 100682.0600 | 62919.1360 | 1113117.6000 | 631450.4700 | τ19468267.0000 | 469009.4500 | 19121.9140 |
| 2 | 16:10:55 | 506408.2200 | 15572.0360 | 100299.9900 | 64176.1670 | 1123875.7000 | 646315.2600 | τ19883485.0000 | 479068.1200 | 19532.8650 |
| 3 | 16:11:35 | 505921.1800 | 15692.2610 | 101643.6300 | 64808.5330 | 1131344.8000 | 651418.0200 | τ19951692.0000 | 479197.7600 | 19828.5620 |
| 4 | 16:12:15 | 510431.6500 | 15476.8590 | 102081.4300 | 64045.1650 | 1124228.9000 | 646353.0200 | τ19880281.0000 | 477377.6300 | 19304.8350 |
| 5 | 16:12:56 | 506546.2400 | 15173.8020 | 98291.2720 | 62629.4660 | 1091901.5000 | 624986.9300 | τ19325792.0000 | 468264.2500 | 19367.4800 |
| x | | 505521.8700 | 15409.2360 | 100599.6800 | 63715.6930 | 1116893.7000 | 640104.7400 | τ19701904.0000 | 474583.4400 | 19431.1310 |
| %RSD | | 0.875 | 1.602 | 1.467 | 1.432 | 1.380 | 1.762 | τ1.443 | 1.155 | 1.371 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 10266.3200 | 26203.6330 | 12837.3800 | 27088.9570 | 1330.1061 | 1085.9041 | 201.6691 | 146.6680 | 805914.9700 |
| 2 | 16:10:55 | 10541.6630 | 27289.6100 | 13147.8640 | 27292.1190 | 1492.6337 | 1135.0773 | 186.6688 | 140.8345 | 813284.4400 |
| 3 | 16:11:35 | 10373.9530 | 27500.3010 | 13087.7690 | 26838.1480 | 1418.4540 | 1198.4195 | 172.5018 | 163.3349 | 826898.9800 |
| 4 | 16:12:15 | 10171.2030 | 27397.4630 | 12792.3110 | 27525.3840 | 1430.9562 | 1170.0821 | 192.5022 | 144.1679 | 823173.3100 |
| 5 | 16:12:56 | 10138.6640 | 26725.2860 | 12844.8920 | 26263.8220 | 1360.1110 | 1169.2487 | 165.8350 | 154.1681 | 822749.3500 |
| x | | 10298.3610 | 27023.2590 | 12942.0430 | 27001.6860 | 1406.4522 | 1151.7463 | 183.8354 | 149.8347 | 818404.2100 |
| %RSD | | 1.593 | 2.026 | 1.260 | 1.793 | 4.518 | 3.743 | 7.947 | 6.008 | 1.051 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 10664.3190 | 167.5017 | 2085.2609 | 100.0006 | 237.5034 | 877915.0800 | 143.7512 | 80.0004 | 91.2505 |
| 2 | 16:10:55 | 10679.3390 | 142.5012 | 2040.2497 | 72.5003 | 275.0045 | 877266.8500 | 180.0019 | 77.5004 | 115.0008 |
| 3 | 16:11:35 | 10974.7220 | 162.5016 | 1980.2353 | 82.5004 | 232.5032 | 904258.6800 | 175.0018 | 70.0003 | 128.7510 |
| 4 | 16:12:15 | 10684.3450 | 192.5022 | 2007.7418 | 75.0003 | 275.0045 | 895446.4900 | 170.0017 | 95.0005 | 113.7508 |
| 5 | 16:12:56 | 10877.0940 | 145.0013 | 1915.2201 | 92.5005 | 227.5031 | 898481.0200 | 176.2519 | 90.0005 | 130.0010 |
| x | | 10775.9640 | 162.0016 | 2005.7415 | 84.5004 | 249.5038 | 890673.6200 | 169.0017 | 82.5004 | 115.7508 |
| %RSD | | 1.312 | 12.461 | 3.189 | 13.782 | 9.437 | 1.387 | 8.616 | 12.121 | 13.501 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 93.7505 | 197.5023 | 772693.5800 | 117.5008 | 85.0004 | 32049.0100 | 56332.2580 | 1238242.7000 | 358.7577 |
| 2 | 16:10:55 | 105.0007 | 235.0033 | 779396.7800 | 132.5011 | 107.5007 | 32405.3840 | 56702.2550 | 1242984.4000 | 335.0067 |
| 3 | 16:11:35 | 91.2505 | 255.0039 | 789091.0200 | 152.5014 | 87.5005 | 32990.1720 | 57198.1260 | 1267529.8000 | 372.5083 |
| 4 | 16:12:15 | 76.2503 | 222.5030 | 792703.4100 | 167.5017 | 92.5005 | 32156.9250 | 57145.2650 | 1253059.2000 | 365.0080 |
| 5 | 16:12:56 | 108.7507 | 237.5034 | 790319.6700 | 120.0009 | 102.5006 | 32116.7700 | 55544.4970 | 1259833.2000 | 331.2566 |
| x | | 95.0005 | 229.5032 | 784840.8900 | 138.0012 | 95.0005 | 32343.6520 | 56584.4800 | 1252329.9000 | 352.5075 |
| %RSD | | 13.483 | 9.288 | 1.079 | 15.605 | 10.192 | 1.192 | 1.202 | 0.956 | 5.218 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:10:15 | 772.5358 | 25413.6920 | 20344.8040 | 52789.1740 | 866223.8500 | 2.5000 |
| 2 | 16:10:55 | 838.7922 | 25624.3360 | 21069.1010 | 53123.7900 | 874469.4900 | 5.0000 |
| 3 | 16:11:35 | 866.2950 | 26278.8700 | 21139.2780 | 53825.7730 | 884467.9300 | 2.5000 |
| 4 | 16:12:15 | 842.5426 | 25759.7520 | 20956.3170 | 52826.9120 | 887303.1500 | 0.0000 |
| 5 | 16:12:56 | 863.7948 | 26053.1620 | 20908.6980 | 52255.8280 | 892326.9900 | 0.0000 |
| x | | 836.7921 | 25825.9630 | 20883.6400 | 52964.2950 | 880958.2800 | 2.0000 |
| %RSD | | 4.537 | 1.330 | 1.507 | 1.084 | 1.192 | 104.583 |

**MF9M26-5X** 06/17/2015 16:13:58

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 224812.0700 | 812.5396 | 305340.8400 | τ3213247.0000 | 387138.4300 | 415443.7600 | τ95151928.0000 | τ3525388.4000 | 179226.8300 |
| 2 | 16:15:19 | 222366.0700 | 871.7123 | 314016.9900 | τ3234823.5000 | 391149.3700 | 419115.9600 | τ97424414.0000 | τ3612486.6000 | 180529.5000 |
| 3 | 16:15:59 | 224905.3700 | 821.7072 | 319637.2300 | τ3285160.9000 | 395817.2100 | 431831.1100 | τ98111339.0000 | τ3653909.3000 | 182593.7500 |
| 4 | 16:16:39 | 224825.7600 | 870.0454 | 321224.0300 | τ3287769.1000 | 397242.6900 | 422726.6500 | τ98055757.0000 | τ3596253.7000 | 183641.4000 |
| 5 | 16:17:19 | 224066.5600 | 820.8738 | 321060.4000 | τ3314277.4000 | 403366.5900 | 429321.2900 | τ97754589.0000 | τ3606327.1000 | 183592.8500 |
| x | | 224195.1700 | 839.3756 | 316255.9000 | τ3267055.6000 | 394942.8600 | 423687.7500 | τ97299605.0000 | τ3598873.0000 | 181916.8600 |
| %RSD | | 0.481 | 3.453 | 2.141 | τ1.273 | 1.562 | 1.617 | τ1.266 | τ1.294 | 1.079 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 503146.7900 | 39043.7510 | 206194.8000 | 135352.8700 | τ2605580.9000 | 1345576.7000 | τ44573219.0000 | 1092208.1000 | 40169.0810 |
| 2 | 16:15:19 | 509632.3900 | 39385.3530 | 207142.8900 | 138145.6400 | τ2640807.1000 | 1361642.1000 | τ45609158.0000 | 1113510.2000 | 40746.8760 |
| 3 | 16:15:59 | 514483.5300 | 39380.3290 | 210984.9900 | 138661.6000 | τ2677331.2000 | 1382663.5000 | τ46149257.0000 | 1132385.5000 | 41666.4060 |
| 4 | 16:16:39 | 512884.3300 | 40905.1480 | 213251.6000 | 138765.8200 | τ2691078.4000 | 1371467.3000 | τ45952040.0000 | 1119811.8000 | 41309.6360 |
| 5 | 16:17:19 | 515347.0100 | 39922.9020 | 211143.9400 | 140046.9800 | τ2702048.2000 | 1376816.1000 | τ45899287.0000 | 1125083.6000 | 41570.9310 |
| x | | 511098.8100 | 39727.4970 | 209743.6500 | 138194.5800 | τ2663369.1000 | 1367633.1000 | τ45636592.0000 | 1116599.8000 | 41092.5860 |
| %RSD | | 0.969 | 1.837 | 1.414 | 1.256 | τ1.491 | 1.064 | τ1.370 | 1.370 | 1.528 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 24699.0480 | 42078.4680 | 20482.6410 | 25190.5160 | 2772.9613 | 1112.5743 | 161.6682 | 160.0015 | 795340.2800 |
| 2 | 16:15:19 | 24623.8260 | 43018.2480 | 20369.8650 | 25127.8270 | 2761.2907 | 1165.0814 | 193.3356 | 175.0018 | 796956.8200 |
| 3 | 16:15:59 | 25824.9540 | 43169.0250 | 20848.5470 | 25687.0280 | 2725.4456 | 1118.4084 | 167.5017 | 150.8347 | 816172.3500 |
| 4 | 16:16:39 | 25827.4620 | 42952.9130 | 20693.1610 | 25421.2150 | 2765.4588 | 1188.4181 | 180.8353 | 155.8348 | 809482.1000 |
| 5 | 16:17:19 | 25784.8300 | 42829.7810 | 21379.8910 | 25870.0930 | 2730.4472 | 1149.2459 | 166.6683 | 159.1682 | 807291.6300 |
| x | | 25352.0240 | 42809.6870 | 20754.8210 | 25459.3360 | 2751.1207 | 1146.7456 | 174.0018 | 160.1682 | 805048.6400 |
| %RSD | | 2.490 | 0.997 | 1.905 | 1.249 | 0.786 | 2.775 | 7.430 | 5.645 | 1.090 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 18974.0760 | 357.5077 | 3743.3406 | 230.0032 | 507.5155 | 865817.1700 | 228.7531 | 125.0009 | 131.2510 |
| 2 | 16:15:19 | 19049.2480 | 290.0051 | 3700.8216 | 215.0028 | 567.5193 | 865164.3000 | 251.2538 | 157.5015 | 167.5017 |
| 3 | 16:15:59 | 19327.3870 | 300.0054 | 3605.7799 | 217.5028 | 502.5152 | 875139.6700 | 238.7534 | 125.0009 | 160.0015 |
| 4 | 16:16:39 | 19372.4910 | 357.5077 | 3615.7843 | 190.0022 | 535.0172 | 866035.7200 | 293.7552 | 162.5016 | 165.0016 |
| 5 | 16:17:19 | 19623.0770 | 365.0080 | 3628.2897 | 192.5022 | 617.5229 | 868841.4700 | 275.0045 | 127.5010 | 137.5011 |
| x | | 19269.2560 | 334.0068 | 3658.8032 | 209.0026 | 546.0180 | 868199.6700 | 257.5040 | 139.5012 | 152.2514 |
| %RSD | | 1.360 | 10.751 | 1.646 | 8.227 | 8.722 | 0.475 | 10.344 | 13.495 | 10.960 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 50.0001 | 165.0016 | 763712.0400 | 275.0045 | 82.5004 | 56667.0160 | 99887.5850 | 1218454.3000 | 686.2783 |
| 2 | 16:15:19 | 72.5003 | 102.5006 | 765224.2800 | 260.0041 | 82.5004 | 58899.9190 | 103035.5700 | 1212442.3000 | 673.7772 |
| 3 | 16:15:59 | 47.5001 | 147.5013 | 778397.0000 | 250.0038 | 115.0008 | 59164.2820 | 102800.1900 | 1232179.9000 | 748.7836 |
| 4 | 16:16:39 | 76.2503 | 142.5012 | 771245.7300 | 277.5046 | 80.0004 | 58560.0360 | 103078.5900 | 1236292.4000 | 733.7823 |
| 5 | 16:17:19 | 63.7502 | 132.5011 | 775236.7900 | 242.5035 | 80.0004 | 58801.7290 | 103782.2500 | 1231606.1000 | 631.2739 |
| x | | 62.0002 | 138.0012 | 770763.1700 | 261.0041 | 88.0005 | 58418.5970 | 102516.8400 | 1226195.0000 | 694.7791 |
| %RSD | | 20.884 | 16.722 | 0.818 | 5.850 | 17.210 | 1.717 | 1.478 | 0.832 | 6.821 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:14:38 | 1675.1684 | 29283.8620 | 24613.7970 | 61790.7400 | 848344.8400 | 0.0000 |
| 2 | 16:15:19 | 1716.4267 | 30234.7490 | 24734.1520 | 62158.4590 | 852846.3900 | 0.0000 |
| 3 | 16:15:59 | 1731.4299 | 30703.9600 | 25009.9740 | 63178.5880 | 864598.6100 | 5.0000 |
| 4 | 16:16:39 | 1655.1644 | 30711.4880 | 24729.1370 | 62813.3420 | 852212.4400 | 0.0000 |
| 5 | 16:17:19 | 1670.1674 | 30405.3680 | 25027.5260 | 62128.2350 | 855357.7700 | 2.5000 |
| x | | 1689.6713 | 30267.8850 | 24822.9170 | 62413.8730 | 854672.0100 | 1.5000 |
| %RSD | | 1.927 | 1.937 | 0.746 | 0.906 | 0.713 | 149.071 |

**MF9M27-5x** 06/17/2015 16:18:20

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 223499.1200 | 1106.7402 | 250826.3600 | ↹3168884.6000 | 385562.8500 | 406047.1800 | ↹87314192.0000 | ↹2599836.7000 | 74241.7440 |
| 2 | 16:19:41 | 225916.3400 | 1072.5690 | 261223.5800 | ↹3254574.4000 | 393820.8800 | 421575.4800 | ↹88502472.0000 | ↹2680060.4000 | 76565.1250 |
| 3 | 16:20:21 | 225441.2300 | 1147.5790 | 261177.1600 | ↹3353186.3000 | 403324.6300 | 427348.6700 | ↹88995717.0000 | ↹2719275.3000 | 77594.5810 |
| 4 | 16:21:01 | 226977.9400 | 1071.7356 | 262373.8900 | ↹3325492.5000 | 396755.2700 | 424803.3600 | ↹88354489.0000 | ↹2704848.8000 | 77311.9730 |
| 5 | 16:21:42 | 229370.4600 | 1119.2418 | 254307.0100 | ↹3230840.2000 | 391390.2900 | 422705.6200 | ↹88379722.0000 | ↹2630558.8000 | 77021.8040 |
| x | | 226241.0200 | 1103.5731 | 257981.6000 | ↹3266595.6000 | 394170.7900 | 420496.0600 | ↹88309318.0000 | ↹2666916.0000 | 76547.0450 |
| %RSD | | 0.953 | 2.925 | 1.983 | ↹2.267 | 1.666 | 1.991 | ↹0.695 | ↹1.891 | 1.755 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 502553.8100 | 25478.8910 | 192091.2200 | 147397.1300 | ↹2713087.8000 | 1179240.6000 | ↹46298236.0000 | 1135685.0000 | 57505.2290 |
| 2 | 16:19:41 | 505144.9000 | 26810.5590 | 194483.2500 | 150517.1600 | ↹2755208.5000 | 1202427.4000 | ↹47301943.0000 | 1152698.2000 | 58678.3640 |
| 3 | 16:20:21 | 517557.9100 | 27294.6270 | 200723.6300 | 151301.1700 | ↹2762075.1000 | 1219557.0000 | ↹47718735.0000 | 1173624.4000 | 59947.3480 |
| 4 | 16:21:01 | 512132.6500 | 26622.4570 | 197408.3300 | 148957.0000 | ↹2748969.9000 | 1203390.2000 | ↹47353301.0000 | 1144520.1000 | 59557.0650 |
| 5 | 16:21:42 | 515624.6700 | 26604.9020 | 195366.0400 | 150372.0700 | ↹2744796.9000 | 1195156.9000 | ↹46921042.0000 | 1145793.6000 | 59398.4390 |
| x | | 510602.7900 | 26562.2870 | 196014.4900 | 149708.9000 | ↹2744827.6000 | 1199954.4000 | ↹47118652.0000 | 1150464.3000 | 59017.2890 |
| %RSD | | 1.279 | 2.509 | 1.659 | 1.031 | ↹0.689 | 1.218 | ↹1.143 | 1.242 | 1.630 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 26762.9060 | 40890.0740 | 19437.6430 | 25493.9370 | 2727.1128 | 1119.2418 | 180.8353 | 154.1681 | 833021.0100 |
| 2 | 16:19:41 | 26910.8820 | 40485.6070 | 19633.1000 | 25940.3110 | 2903.8392 | 1150.9128 | 189.1688 | 150.8347 | 842394.1800 |
| 3 | 16:20:21 | 27382.4140 | 42447.8340 | 20597.9250 | 26454.4240 | 2967.1948 | 1145.0787 | 175.0018 | 149.1680 | 843660.7100 |
| 4 | 16:21:01 | 27297.1350 | 41696.5560 | 19755.8900 | 25707.0900 | 2943.8532 | 1196.7526 | 205.8359 | 156.6681 | 839955.4800 |
| 5 | 16:21:42 | 27269.5450 | 41269.4380 | 19537.8770 | 25917.7410 | 2888.0003 | 1125.0759 | 175.0018 | 164.1683 | 843034.3200 |
| x | | 27124.5760 | 41357.9020 | 19792.4870 | 25902.7010 | 2886.0001 | 1147.4124 | 185.1687 | 155.0014 | 840413.1400 |
| %RSD | | 0.999 | 1.830 | 2.351 | 1.380 | 3.265 | 2.667 | 6.982 | 3.802 | 0.519 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 13460.8630 | 315.0060 | 2670.4278 | 285.0049 | 505.0153 | 864555.7400 | 205.0025 | 95.0005 | 132.5011 |
| 2 | 16:19:41 | 13924.1230 | 297.5053 | 2512.8788 | 192.5022 | 517.5161 | 869040.7200 | 177.5019 | 72.5003 | 145.0013 |
| 3 | 16:20:21 | 14086.8960 | 317.5061 | 2705.4391 | 185.0021 | 490.0144 | 869613.6200 | 236.2534 | 102.5006 | 135.0011 |
| 4 | 16:21:01 | 13793.9070 | 320.0061 | 2712.9415 | 225.0030 | 500.0150 | 869419.8800 | 212.5027 | 107.5007 | 136.2511 |
| 5 | 16:21:42 | 13826.4610 | 337.5068 | 2580.3994 | 167.5017 | 530.0169 | 866212.7900 | 237.5034 | 97.5006 | 112.5008 |
| x | | 13818.4500 | 317.5061 | 2636.4173 | 211.0028 | 508.5155 | 867768.5500 | 213.7528 | 95.0005 | 132.2511 |
| %RSD | | 1.665 | 4.489 | 3.295 | 21.953 | 3.063 | 0.261 | 11.608 | 14.172 | 9.076 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 51.2502 | 162.5016 | 759335.4300 | 225.0030 | 77.5004 | 59096.3020 | 102660.9900 | 1225092.6000 | 641.2747 |
| 2 | 16:19:41 | 52.5002 | 165.0016 | 775083.4700 | 282.5048 | 95.0005 | 60456.0030 | 104946.6900 | 1227394.8000 | 592.5211 |
| 3 | 16:20:21 | 71.2503 | 157.5015 | 770534.2100 | 290.0051 | 97.5006 | 60896.6940 | 106551.8700 | 1225216.5000 | 650.0254 |
| 4 | 16:21:01 | 55.0002 | 112.5008 | 766982.9500 | 207.5026 | 90.0005 | 59554.5470 | 104898.5900 | 1215535.5000 | 671.2770 |
| 5 | 16:21:42 | 51.2502 | 135.0011 | 778092.9800 | 202.5025 | 85.0004 | 59408.5100 | 104961.8800 | 1237082.8000 | 562.5190 |
| x | | 56.2502 | 146.5013 | 770005.8100 | 241.5036 | 89.0005 | 59882.4110 | 104804.0100 | 1226064.5000 | 623.5234 |
| %RSD | | 15.154 | 15.292 | 0.951 | 17.301 | 9.015 | 1.268 | 1.324 | 0.626 | 7.164 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:19:00 | 1555.1451 | 35472.8390 | 28664.2140 | 73114.3420 | 858900.9000 | 0.0000 |
| 2 | 16:19:41 | 1586.4010 | 35570.7550 | 29298.9150 | 73828.0930 | 855305.2700 | 2.5000 |
| 3 | 16:20:21 | 1612.6560 | 37117.4790 | 29625.0650 | 73674.2400 | 854005.3000 | 0.0000 |
| 4 | 16:21:01 | 1583.9005 | 36040.2660 | 29012.9170 | 74150.9400 | 855326.0000 | 2.5000 |
| 5 | 16:21:42 | 1536.3916 | 36015.1580 | 28917.5870 | 72319.9550 | 860833.3700 | 2.5000 |
| x | | 1574.8988 | 36043.2990 | 29103.7400 | 73417.5140 | 856874.1700 | 1.5000 |
| %RSD | | 1.881 | 1.811 | 1.269 | 0.980 | 0.335 | 91.287 |

**MF9M27S-5x** 06/17/2015 16:22:43

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 224792.3800 | 6910.3640 | 274774.0700 | ┬3277692.1000 | 391893.1200 | 419010.8600 | ┬87574232.0000 | ┬3127293.3000 | 239055.3600 |
| 2 | 16:24:03 | 223048.1100 | 6951.2313 | 276326.6700 | ┬3312001.2000 | 399916.1100 | 422563.6900 | ┬87347025.0000 | ┬3169205.3000 | 239793.6200 |
| 3 | 16:24:44 | 222847.8500 | 7183.9285 | 278923.5700 | ┬3344958.8000 | 397719.6500 | 421312.6700 | ┬87295677.0000 | ┬3179027.8000 | 244695.5700 |
| 4 | 16:25:24 | 223983.5300 | 7001.2732 | 280254.6300 | ┬3278782.8000 | 401562.5200 | 428048.2400 | ┬87244653.0000 | ┬3197681.9000 | 244595.1900 |
| 5 | 16:26:04 | 221785.0600 | 6886.1773 | 269258.3400 | ┬3204734.9000 | 388928.9800 | 413348.3200 | ┬85782810.0000 | ┬3103809.5000 | 234886.8000 |
| x | | 223291.3900 | 6986.5949 | 275907.4600 | ┬3283634.0000 | 396004.0800 | 420856.7600 | ┬87048880.0000 | ┬3155403.5000 | 240605.3100 |
| %RSD | | 0.513 | 1.698 | 1.555 | ┬1.586 | 1.360 | 1.272 | ┬0.826 | ┬1.226 | 1.719 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 501937.0000 | 52547.6550 | 526715.8300 | 255863.5800 | ┬2643682.1000 | ┬1587120.5000 | ┬44991682.0000 | 1098389.4000 | 461544.4900 |
| 2 | 16:24:03 | 502143.9300 | 52736.3410 | 535071.2400 | 257858.6800 | ┬2649474.0000 | 1601620.0000 | ┬45708436.0000 | 1119097.2000 | 465513.9000 |
| 3 | 16:24:44 | 508166.8300 | 54683.8330 | 541742.2200 | 257943.7600 | ┬2694176.7000 | 1593736.0000 | ┬45929488.0000 | 1116620.6000 | 468988.3100 |
| 4 | 16:25:24 | 508685.8500 | 52391.6770 | 527412.9200 | 257093.0700 | ┬2659704.2000 | 1576281.0000 | ┬44990909.0000 | 1094621.1000 | 462545.2500 |
| 5 | 16:26:04 | 499816.3100 | 51199.3000 | 516601.2000 | 251331.2400 | ┬2603975.9000 | 1543789.6000 | ┬44403649.0000 | 1076361.3000 | 446573.4200 |
| x | | 504149.9900 | 52711.7610 | 529508.6800 | 256018.0600 | ┬2650202.6000 | ┬1580509.4000 | ┬45204833.0000 | 1101017.9000 | 461033.0700 |
| %RSD | | 0.796 | 2.382 | 1.790 | 1.074 | ┬1.223 | ┬1.426 | ┬1.360 | 1.590 | 1.863 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 113021.2700 | 154881.0400 | 74307.3240 | 81948.4620 | 6602.6146 | 3200.6145 | 1038.3980 | 160.0015 | 817715.7100 |
| 2 | 16:24:03 | 112838.8200 | 154634.0100 | 74584.7860 | 83056.8540 | 6928.7126 | 3098.0758 | 1009.2278 | 154.1681 | 815058.3300 |
| 3 | 16:24:44 | 114767.3900 | 156281.8300 | 74953.0690 | 82233.7510 | 6625.9665 | 3114.7487 | 1025.8965 | 143.3346 | 816945.3800 |
| 4 | 16:25:24 | 114283.3000 | 154407.3700 | 74385.5170 | 83327.0310 | 6836.9702 | 3177.2723 | 1020.0624 | 141.6679 | 811002.2900 |
| 5 | 16:26:04 | 111270.4400 | 149600.8800 | 71555.9010 | 80547.4010 | 6632.6385 | 3147.2609 | 1014.2284 | 156.6681 | 812841.7100 |
| x | | 113236.2400 | 153961.0200 | 73957.3200 | 82222.7000 | 6725.3805 | 3147.5944 | 1021.5626 | 151.1680 | 814712.6800 |
| %RSD | | 1.210 | 1.653 | 1.846 | 1.332 | 2.197 | 1.350 | 1.106 | 5.424 | 0.344 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 20139.3060 | 322.5062 | 3663.3050 | 212.5027 | 617.5229 | 845628.4500 | 24132.3920 | 470.0133 | 23228.5790 |
| 2 | 16:24:03 | 20084.1730 | 307.5057 | 3700.8216 | 210.0027 | 565.0192 | 850197.6500 | 24976.1220 | 445.0119 | 23661.0430 |
| 3 | 16:24:44 | 20399.9390 | 360.0078 | 3760.8484 | 255.0039 | 552.5183 | 853244.1900 | 24815.6440 | 500.0150 | 23801.4420 |
| 4 | 16:25:24 | 19981.4270 | 282.5048 | 3583.2702 | 215.0028 | 607.5221 | 853114.3500 | 24622.5730 | 430.0111 | 24181.2830 |
| 5 | 16:26:04 | 19908.7530 | 375.0084 | 3595.7756 | 225.0030 | 557.5187 | 857701.2700 | 24069.7110 | 480.0138 | 23058.1070 |
| x | | 20102.7200 | 329.5066 | 3660.8042 | 223.5030 | 580.0202 | 851977.1800 | 24523.2880 | 465.0130 | 23586.0910 |
| %RSD | | 0.938 | 11.499 | 2.019 | 8.281 | 5.208 | 0.522 | 1.655 | 5.987 | 1.911 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 5169.1027 | 11843.4100 | 754116.9800 | 365.0080 | 2150.2774 | 175414.4900 | 306375.2900 | 1185537.2000 | 20562.8390 |
| 2 | 16:24:03 | 5115.3195 | 11863.4380 | 757919.8500 | 330.0065 | 2125.2710 | 175986.3600 | 307124.6300 | 1200462.0000 | 20708.1980 |
| 3 | 16:24:44 | 5146.5888 | 12111.2950 | 752328.1300 | 312.5059 | 2252.8045 | 175843.3800 | 311341.8700 | 1190793.5000 | 20782.1320 |
| 4 | 16:25:24 | 5077.7966 | 11905.9990 | 754152.4900 | 322.5062 | 2205.2918 | 173745.0500 | 306696.8000 | 1197267.7000 | 20823.4850 |
| 5 | 16:26:04 | 5002.7512 | 11710.7230 | 758496.4400 | 342.5070 | 2072.7577 | 171274.7000 | 302051.6700 | 1203301.1000 | 19978.9210 |
| x | | 5102.3117 | 11886.9730 | 755402.7800 | 334.5067 | 2161.2805 | 174452.8000 | 306718.0500 | 1195472.3000 | 20571.1150 |
| %RSD | | 1.282 | 1.221 | 0.354 | 6.058 | 3.236 | 1.140 | 1.074 | 0.606 | 1.680 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:23:23 | 49043.8950 | 71818.1430 | 58726.1990 | 145855.3500 | 834764.4500 | 5.0000 |
| 2 | 16:24:03 | 49372.0740 | 71586.1600 | 57761.9950 | 146035.9800 | 829029.6300 | 2.5000 |
| 3 | 16:24:44 | 50388.1290 | 72715.8780 | 60027.9250 | 147420.0300 | 841565.1100 | 2.5000 |
| 4 | 16:25:24 | 50313.9320 | 73116.8630 | 58758.9290 | 147669.3800 | 839376.2400 | 12.5000 |
| 5 | 16:26:04 | 48700.6410 | 70501.9750 | 57248.4700 | 144916.6900 | 846009.3600 | 5.0000 |
| x | | 49563.7340 | 71947.8040 | 58504.7040 | 146379.4900 | 838148.9600 | 5.5000 |
| %RSD | | 1.528 | 1.423 | 1.826 | 0.785 | 0.777 | 74.689 |

**MF9M27D-5x** 06/17/2015 16:27:07

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 224488.5200 | 1277.5979 | 326266.8700 | τ3988366.9000 | 477848.5000 | 511410.2500 | τ112431560.0000 | τ3832571.7000 | 123072.1400 |
| 2 | 16:28:27 | 225173.2900 | 1295.1006 | 328720.5300 | τ3975752.9000 | 480896.5500 | 513811.4000 | τ111583210.0000 | τ3862942.5000 | 124916.7900 |
| 3 | 16:29:08 | 227451.4200 | 1328.4392 | 340778.1700 | τ4127357.9000 | 484676.3700 | 525529.3300 | τ115002500.0000 | τ3927924.3000 | 124827.9700 |
| 4 | 16:29:48 | 226067.0100 | 1305.9357 | 334275.0700 | τ4065283.8000 | 491504.3900 | 517361.2500 | τ113221010.0000 | τ3933757.6000 | 126124.7800 |
| 5 | 16:30:28 | 228609.9900 | 1310.9364 | 328125.2500 | τ4032397.3000 | 481023.5800 | 509949.6900 | τ110829690.0000 | τ3847161.2000 | 124056.5800 |
| x | | 226358.0500 | 1303.6020 | 331633.1800 | τ4037831.8000 | 483189.8800 | 515612.3800 | τ112613590.0000 | τ3880871.5000 | 124599.6500 |
| %RSD | | 0.741 | 1.448 | 1.785 | τ1.522 | 1.084 | 1.205 | τ1.429 | τ1.209 | 0.907 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 505958.3400 | 31757.8990 | 254907.4400 | 172591.4500 | τ3236847.3000 | 1012957.6000 | τ55163737.0000 | 1342832.4000 | 61810.8880 |
| 2 | 16:28:27 | 503849.9200 | 32144.3760 | 257714.3200 | 173796.1000 | τ3241564.6000 | 1020173.4000 | τ55398655.0000 | 1362993.6000 | 63503.5440 |
| 3 | 16:29:08 | 513499.2700 | 31762.9180 | 260442.1900 | 175194.9400 | τ3279121.5000 | 1015875.3000 | τ55484344.0000 | 1347276.3000 | 63584.1550 |
| 4 | 16:29:48 | 511829.8700 | 32380.2870 | 259013.6900 | 171938.1500 | τ3243309.2000 | 1016165.1000 | τ55435112.0000 | 1360290.8000 | 62982.1090 |
| 5 | 16:30:28 | 513110.1100 | 32006.3470 | 256263.0800 | 174301.4900 | τ3261047.9000 | 1012752.3000 | τ54982953.0000 | 1357588.7000 | 62380.1060 |
| x | | 509649.5000 | 32010.3650 | 257668.1400 | 173564.4300 | τ3252378.1000 | 1015584.7000 | τ55292960.0000 | 1354196.4000 | 62852.1600 |
| %RSD | | 0.871 | 0.826 | 0.848 | 0.754 | τ0.539 | 0.297 | τ0.385 | 0.643 | 1.202 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 29715.3860 | 48656.6350 | 23237.3530 | 31306.1940 | 3724.9990 | 1105.0733 | 180.8353 | 159.1682 | 818629.2000 |
| 2 | 16:28:27 | 30317.5490 | 49818.4690 | 23264.9300 | 31677.5940 | 3712.4934 | 1160.9142 | 184.1687 | 155.8348 | 817718.4700 |
| 3 | 16:29:08 | 30688.9050 | 49916.5530 | 23926.8000 | 31795.5420 | 3833.3815 | 1119.2418 | 214.1694 | 169.1684 | 817025.1600 |
| 4 | 16:29:48 | 30415.4050 | 49944.2180 | 24042.1310 | 32134.3380 | 3741.6732 | 1126.7428 | 206.6692 | 158.3348 | 826348.1500 |
| 5 | 16:30:28 | 30139.4050 | 49172.1470 | 23818.9920 | 31707.7080 | 3658.3028 | 1180.0835 | 210.8360 | 166.6683 | 821807.9000 |
| x | | 30255.3300 | 49501.6050 | 23658.0410 | 31724.2750 | 3734.1700 | 1138.4111 | 199.3357 | 161.8349 | 820305.7800 |
| %RSD | | 1.195 | 1.148 | 1.606 | 0.933 | 1.705 | 2.728 | 7.846 | 3.556 | 0.468 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 22746.0010 | 290.0051 | 4211.0637 | 197.5023 | 517.5161 | 842863.2500 | 261.2541 | 150.0014 | 160.0015 |
| 2 | 16:28:27 | 22861.3150 | 312.5059 | 4108.5125 | 220.0029 | 510.0156 | 844679.0200 | 292.5051 | 142.5012 | 158.7515 |
| 3 | 16:29:08 | 23016.7420 | 335.0067 | 4131.0237 | 192.5022 | 395.0094 | 841894.8000 | 305.0056 | 210.0027 | 162.5016 |
| 4 | 16:29:48 | 23094.4570 | 312.5059 | 4138.5274 | 162.5016 | 540.0175 | 850120.3300 | 312.5059 | 145.0013 | 197.5023 |
| 5 | 16:30:28 | 22916.4670 | 312.5059 | 4161.0386 | 205.0025 | 467.5131 | 857648.7600 | 281.2548 | 155.0014 | 160.0015 |
| x | | 22926.9960 | 312.5059 | 4150.0332 | 195.5023 | 486.0143 | 847441.2300 | 290.5051 | 160.5016 | 167.7517 |
| %RSD | | 0.590 | 5.091 | 0.938 | 10.828 | 11.779 | 0.771 | 6.969 | 17.498 | 9.947 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 87.5005 | 97.5006 | 755936.2500 | 182.5020 | 87.5005 | 86612.7790 | 151392.8100 | 1193678.3000 | 825.0408 |
| 2 | 16:28:27 | 41.2501 | 135.0011 | 753819.2700 | 232.5032 | 62.5002 | 87575.2600 | 153801.3100 | 1186985.8000 | 820.0404 |
| 3 | 16:29:08 | 78.7504 | 130.0010 | 756141.1500 | 192.5022 | 85.0004 | 86913.3850 | 152176.9000 | 1189401.6000 | 791.2876 |
| 4 | 16:29:48 | 62.5002 | 127.5010 | 749745.1800 | 190.0022 | 80.0004 | 86602.6750 | 151061.8800 | 1192495.6000 | 797.5382 |
| 5 | 16:30:28 | 71.2503 | 107.5007 | 754067.8200 | 260.0041 | 52.5002 | 86438.4840 | 151464.0900 | 1201634.3000 | 785.0370 |
| x | | 68.2503 | 119.5009 | 753941.9300 | 211.5027 | 73.5003 | 86828.5170 | 151979.4000 | 1192839.1000 | 803.7888 |
| %RSD | | 25.921 | 13.510 | 0.341 | 15.784 | 20.773 | 0.520 | 0.722 | 0.467 | 2.210 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:27:47 | 1878.9618 | 37255.5930 | 29978.8270 | 74781.5380 | 829956.7000 | 2.5000 |
| 2 | 16:28:27 | 1885.2132 | 37361.0640 | 29737.9660 | 75089.2870 | 827007.7700 | 5.0000 |
| 3 | 16:29:08 | 1888.9641 | 37750.3120 | 29835.8150 | 75714.9090 | 829248.6500 | 2.5000 |
| 4 | 16:29:48 | 1976.4844 | 37361.0640 | 30493.1880 | 76343.1020 | 832861.1500 | 0.0000 |
| 5 | 16:30:28 | 1857.7070 | 36966.8110 | 30119.3320 | 75664.4540 | 846996.2000 | 0.0000 |
| x | | 1897.4661 | 37338.9690 | 30033.0260 | 75518.6580 | 833214.1000 | 2.0000 |
| %RSD | | 2.414 | 0.752 | 0.982 | 0.802 | 0.958 | 104.583 |

**MF9M27A-5x** 06/17/2015 16:31:29

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 222198.3500 | 7067.9961 | τ7530646.7000 | τ7034407.4000 | 865955.4900 | 919746.5500 | τ86569450.0000 | τ5667868.6000 | 202926.0200 |
| 2 | 16:32:50 | 221615.6400 | 7017.9539 | τ7584529.2000 | τ7148051.9000 | 866768.8900 | 924351.7300 | τ86116401.0000 | τ5713656.9000 | 204516.7000 |
| 3 | 16:33:30 | 223737.9000 | 7033.8005 | τ7823527.8000 | τ7218495.8000 | 869691.1100 | 932565.7300 | τ88127580.0000 | τ5803552.6000 | 205175.0900 |
| 4 | 16:34:10 | 223499.1200 | 7034.6346 | τ7683694.5000 | τ6985682.4000 | 855454.4900 | 932838.9100 | τ85515071.0000 | τ5782163.8000 | 205805.3500 |
| 5 | 16:34:51 | 222460.2000 | 6698.5245 | τ7342390.1000 | τ6994573.8000 | 843034.3200 | 906595.8300 | τ84963326.0000 | τ5540439.0000 | 197067.9200 |
| x | | 222702.2400 | 6970.5819 | τ7592957.7000 | τ7076242.2000 | 860180.8600 | 923219.7500 | τ86258366.0000 | τ5701536.2000 | 203098.2200 |
| %RSD | | 0.402 | 2.197 | τ2.357 | τ1.448 | 1.278 | 1.174 | τ1.401 | τ1.842 | 1.742 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 497759.7800 | 25519.0130 | 338417.3300 | 202139.7500 | τ2798138.7000 | 1197362.5000 | τ48548425.0000 | 1177887.8000 | 95820.2420 |
| 2 | 16:32:50 | 501440.9400 | 26384.2020 | 342876.6700 | 202349.7600 | τ2829819.9000 | 1208746.1000 | τ48602559.0000 | 1197776.0000 | 96098.4180 |
| 3 | 16:33:30 | 500330.8600 | 26150.9680 | 346082.7000 | 203730.2900 | τ2870545.0000 | 1223925.8000 | τ49316067.0000 | 1208694.4000 | 97403.4380 |
| 4 | 16:34:10 | 503544.7800 | 25912.7260 | 337457.0400 | 202672.4600 | τ2846860.8000 | 1216013.3000 | τ48544268.0000 | 1176598.3000 | 96326.0230 |
| 5 | 16:34:51 | 502678.5100 | 25190.5160 | 333627.3700 | 196765.9000 | τ2771439.9000 | 1175455.0000 | τ46914952.0000 | 1141448.5000 | 93289.2670 |
| x | | 501150.9700 | 25831.4850 | 339692.2200 | 201531.6300 | τ2823360.9000 | 1204300.6000 | τ48385254.0000 | 1180481.0000 | 95787.4780 |
| %RSD | | 0.450 | 1.859 | 1.430 | 1.356 | τ1.389 | 1.566 | τ1.827 | 2.176 | 1.587 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 34621.7710 | 79709.4010 | 38262.6410 | 35759.0580 | 7095.5195 | 6479.1845 | 2302.8181 | 160.8349 | 815872.5200 |
| 2 | 16:32:50 | 35156.5030 | 81839.9020 | 38199.8540 | 36133.1670 | 7260.6617 | 6599.2787 | 2325.3244 | 155.0014 | 818142.1800 |
| 3 | 16:33:30 | 35861.9990 | 82117.6140 | 39412.9830 | 36364.1680 | 7159.7411 | 6490.8602 | 2393.6771 | 161.6682 | 818153.1900 |
| 4 | 16:34:10 | 34513.8250 | 80257.1200 | 38428.4010 | 35673.6940 | 7263.9979 | 6472.5126 | 2311.9873 | 140.8345 | 812998.4500 |
| 5 | 16:34:51 | 33810.9520 | 77867.1050 | 37664.9270 | 35349.8180 | 7063.8259 | 6404.1265 | 2239.4675 | 191.6689 | 821150.0500 |
| x | | 34793.0100 | 80358.2290 | 38393.7610 | 35855.9810 | 7168.7492 | 6489.1925 | 2314.6549 | 162.0016 | 817263.2800 |
| %RSD | | 2.201 | 2.149 | 1.661 | 1.110 | 1.286 | 1.082 | 2.382 | 11.460 | 0.371 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 13050.2100 | 315.0060 | 2685.4326 | 197.5023 | 492.5146 | 840132.0100 | 24661.4370 | 400.0096 | 23380.2520 |
| 2 | 16:32:50 | 13558.5210 | 352.5075 | 2682.9318 | 207.5026 | 457.5126 | 844276.1000 | 25132.8430 | 455.0124 | 23997.0020 |
| 3 | 16:33:30 | 13628.6350 | 325.0063 | 2610.4088 | 170.0017 | 495.0147 | 846569.7100 | 25374.8240 | 370.0082 | 24192.5660 |
| 4 | 16:34:10 | 13072.7460 | 345.0071 | 2672.9286 | 200.0024 | 507.5155 | 846597.3100 | 25317.1490 | 400.0096 | 24840.7190 |
| 5 | 16:34:51 | 12972.5890 | 242.5035 | 2622.9127 | 170.0017 | 502.5152 | 859528.4200 | 23951.8720 | 460.0127 | 23143.3420 |
| x | | 13256.5400 | 316.0061 | 2654.9229 | 189.0022 | 491.0145 | 847420.7100 | 24887.6250 | 417.0105 | 23910.7760 |
| %RSD | | 2.345 | 13.846 | 1.338 | 9.381 | 4.003 | 0.857 | 2.385 | 9.350 | 2.823 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 5017.7602 | 11280.1290 | 744409.7000 | 227.5031 | 27151.6610 | 87375.6820 | 151245.1600 | 1186853.8000 | 19923.7890 |
| 2 | 16:32:50 | 4968.9810 | 11983.6100 | 750452.2700 | 227.5031 | 26973.5840 | 87663.6830 | 153696.9100 | 1195277.5000 | 20322.2490 |
| 3 | 16:33:30 | 5021.5125 | 11770.8070 | 747113.8700 | 230.0032 | 27289.6100 | 88065.3850 | 153788.5800 | 1195751.3000 | 21007.6960 |
| 4 | 16:34:10 | 4972.7332 | 11663.1560 | 750807.2100 | 207.5026 | 26436.8680 | 86489.0040 | 153399.0000 | 1200996.4000 | 20408.7100 |
| 5 | 16:34:51 | 4686.3173 | 11072.3510 | 752838.8000 | 240.0035 | 26018.0530 | 84574.5040 | 147682.1100 | 1197170.0000 | 20072.8960 |
| x | | 4933.4609 | 11554.0110 | 749124.3700 | 226.5031 | 26773.9550 | 86833.6510 | 151962.3500 | 1195209.8000 | 20347.0680 |
| %RSD | | 2.844 | 3.211 | 0.446 | 5.212 | 1.988 | 1.600 | 1.717 | 0.434 | 2.049 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:32:09 | 48068.2350 | 50152.9660 | 42563.4220 | 104301.1600 | 828194.9400 | 0.0000 |
| 2 | 16:32:50 | 49041.3800 | 50610.7210 | 43081.0720 | 105392.2600 | 836502.7200 | 0.0000 |
| 3 | 16:33:30 | 49434.9450 | 51254.6390 | 43596.2400 | 106536.6800 | 833995.3600 | 0.0000 |
| 4 | 16:34:10 | 49382.1330 | 49848.6490 | 42505.6280 | 106093.5800 | 839052.1700 | 2.5000 |
| 5 | 16:34:51 | 47626.9620 | 49224.9580 | 40864.9520 | 103060.8800 | 835918.2000 | 0.0000 |
| x | | 48710.7310 | 50218.3870 | 42522.2630 | 105076.9100 | 834732.6800 | 0.5000 |
| %RSD | | 1.678 | 1.528 | 2.414 | 1.340 | 0.488 | 223.607 |

**MF9M27L-5x** 06/17/2015 16:35:52

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 222662.1600 | 240.0035 | 67517.4130 | 632883.2800 | 78805.8680 | 84460.8600 | τ17720328.0000 | 562782.7400 | 15491.8870 |
| 2 | 16:37:12 | 224290.8000 | 272.5045 | 68518.0300 | 633998.4400 | 81016.9190 | 85567.0590 | τ18115175.0000 | 581555.7300 | 15609.6060 |
| 3 | 16:37:53 | 226067.0100 | 238.3367 | 68646.5810 | 655500.2400 | 82597.3200 | 87118.0050 | τ18451994.0000 | 587643.8600 | 16045.4320 |
| 4 | 16:38:33 | 226955.6800 | 265.0042 | 68470.1390 | 657644.7200 | 82445.8310 | 88386.2550 | τ18628624.0000 | 588185.1100 | 15804.9740 |
| 5 | 16:39:13 | 227837.6000 | 215.8361 | 68018.9660 | 648179.5400 | 80663.5160 | 86057.0670 | τ18344519.0000 | 582187.6400 | 16198.2280 |
| x | | 225562.6500 | 246.3370 | 68234.2260 | 645641.2400 | 81105.8910 | 86317.8490 | τ18252128.0000 | 580471.0200 | 15830.0250 |
| %RSD | | 0.925 | 9.229 | 0.682 | 1.810 | 1.901 | 1.738 | τ1.921 | 1.782 | 1.857 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 487456.7200 | 5226.6386 | 39204.5030 | 30819.3850 | 530899.1800 | 236041.2500 | τ9631251.1000 | 224650.2900 | 12369.1730 |
| 2 | 16:37:12 | 488598.2400 | 5301.6859 | 39523.5050 | 31815.6180 | 541902.1300 | 241759.2100 | τ9831064.4000 | 231568.3400 | 12051.2080 |
| 3 | 16:37:53 | 494427.4200 | 5406.7534 | 40970.4680 | 31996.3080 | 552697.6900 | 243928.5700 | τ9839115.4000 | 233051.3400 | 12421.7510 |
| 4 | 16:38:33 | 493902.6400 | 5406.7534 | 40294.6850 | 31757.8990 | 555534.8300 | 242248.1000 | τ9981245.4000 | 236141.5300 | 12506.8780 |
| 5 | 16:39:13 | 498031.5700 | 5186.6136 | 40520.7770 | 31629.9130 | 547532.9100 | 241200.8800 | τ9874261.3000 | 232953.6600 | 12474.3300 |
| x | | 492483.3200 | 5305.6890 | 40102.7870 | 31603.8250 | 545713.3500 | 241035.6000 | τ9831387.5000 | 231673.0300 | 12364.6680 |
| %RSD | | 0.891 | 1.905 | 1.810 | 1.449 | 1.792 | 1.233 | τ1.291 | 1.842 | 1.479 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 5486.8057 | 9925.9079 | 4548.7411 | 6137.2591 | 581.6870 | 1078.4031 | 129.1677 | 154.1681 | 775672.1400 |
| 2 | 16:37:12 | 5406.7534 | 10403.9910 | 5076.5458 | 6029.6806 | 602.5218 | 1099.2392 | 168.3350 | 170.0017 | 779191.3300 |
| 3 | 16:37:53 | 5601.8822 | 10616.7590 | 4836.4030 | 6157.2739 | 638.3578 | 1081.7369 | 165.0016 | 146.6680 | 774431.8700 |
| 4 | 16:38:33 | 5869.5664 | 10163.6940 | 5019.0110 | 6307.3861 | 617.5229 | 1111.7408 | 149.1680 | 150.8347 | 790577.4900 |
| 5 | 16:39:13 | 5626.8991 | 10148.6760 | 4996.4975 | 6214.8166 | 609.1889 | 1155.9135 | 155.8348 | 160.8349 | 795035.6700 |
| x | | 5598.3814 | 10251.8050 | 4895.4397 | 6169.2833 | 609.8557 | 1105.4067 | 153.5014 | 156.5015 | 782981.7000 |
| %RSD | | 3.139 | 2.585 | 4.357 | 1.657 | 3.399 | 2.831 | 10.138 | 5.850 | 1.184 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 2810.4738 | 65.0003 | 520.0162 | 22.5000 | 77.5004 | 879452.7400 | 83.7504 | 15.0000 | 58.7502 |
| 2 | 16:37:12 | 2770.4605 | 57.5002 | 572.5197 | 40.0001 | 92.5005 | 880192.5700 | 76.2503 | 20.0000 | 53.7502 |
| 3 | 16:37:53 | 2682.9318 | 70.0003 | 590.0209 | 35.0001 | 85.0004 | 885572.7900 | 66.2503 | 37.5001 | 50.0001 |
| 4 | 16:38:33 | 2682.9318 | 75.0003 | 517.5161 | 40.0001 | 117.5008 | 887990.9400 | 78.7504 | 27.5000 | 41.2501 |
| 5 | 16:39:13 | 2702.9383 | 80.0004 | 510.0156 | 50.0001 | 95.0005 | 883296.6700 | 65.0003 | 17.5000 | 37.5001 |
| x | | 2729.9472 | 69.5003 | 542.0177 | 37.5001 | 93.5005 | 883301.1400 | 74.0003 | 23.5000 | 48.2501 |
| %RSD | | 2.110 | 12.564 | 6.743 | 26.667 | 16.110 | 0.407 | 10.973 | 38.797 | 18.190 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 11.2500 | 62.5002 | 770712.0900 | 80.0004 | 27.5000 | 12136.3310 | 21327.2560 | 1232012.6000 | 160.0015 |
| 2 | 16:37:12 | 15.0000 | 25.0000 | 775335.3600 | 70.0003 | 37.5001 | 12419.2470 | 21971.4260 | 1227403.5000 | 166.2517 |
| 3 | 16:37:53 | 12.5000 | 45.0001 | 781963.8700 | 150.0014 | 40.0001 | 12331.6170 | 21540.3030 | 1237962.8000 | 162.5016 |
| 4 | 16:38:33 | 8.7500 | 52.5002 | 786930.3300 | 70.0003 | 37.5001 | 13012.6520 | 22405.0790 | 1239717.1000 | 156.2515 |
| 5 | 16:39:13 | 22.5000 | 47.5001 | 786146.2500 | 85.0004 | 42.5001 | 12281.5440 | 21570.3810 | 1245028.5000 | 172.5018 |
| x | | 14.0000 | 46.5001 | 780217.5800 | 91.0006 | 37.0001 | 12436.2780 | 21762.8890 | 1236424.9000 | 163.5016 |
| %RSD | | 37.564 | 29.594 | 0.900 | 36.940 | 15.408 | 2.719 | 1.966 | 0.555 | 3.800 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:36:32 | 373.7584 | 7255.6573 | 5947.1213 | 14880.7740 | 877906.7700 | 0.0000 |
| 2 | 16:37:12 | 416.2604 | 7270.6704 | 6234.8315 | 15351.6270 | 877539.7100 | 0.0000 |
| 3 | 16:37:53 | 390.0091 | 7453.3316 | 6164.7794 | 15486.8770 | 893946.2700 | 0.0000 |
| 4 | 16:38:33 | 381.2587 | 7530.9013 | 6254.8465 | 15604.5970 | 883140.0600 | 2.5000 |
| 5 | 16:39:13 | 382.5088 | 7528.3991 | 6249.8428 | 15281.4990 | 888341.8000 | 0.0000 |
| x | | 388.7591 | 7407.7919 | 6170.2843 | 15321.0750 | 884174.9200 | 0.5000 |
| %RSD | | 4.223 | 1.833 | 2.105 | 1.800 | 0.794 | 223.607 |

CCV2 06/17/2015 16:40:15

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | 206444.2000 | ↹1425386.2000 | ↹70042002.0000 | ↹37158384.0000 | ↹4679957.8000 | ↹4871395.3000 | ↹102295000.0000 | ↹29386704.0000 | 1267964.0000 |
| 2 | 16:41:35 | 204591.8500 | ↹1438171.4000 | ↹70525999.0000 | ↹37569287.0000 | ↹4686096.1000 | ↹4905282.5000 | ↹102356360.0000 | ↹30118427.0000 | ↹1283559.7000 |
| 3 | 16:42:16 | 203389.6200 | ↹1445727.4000 | ↹71244582.0000 | ↹37779647.0000 | ↹4705629.3000 | ↹4968886.9000 | ↹103732730.0000 | ↹30711706.0000 | 1311230.5000 |
| 4 | 16:42:56 | 207849.3200 | ↹1442104.5000 | ↹72224574.0000 | ↹38147468.0000 | ↹4741008.0000 | ↹4966035.0000 | ↹102998310.0000 | ↹30557895.0000 | 1302702.9000 |
| 5 | 16:43:36 | 207628.9300 | ↹1435506.8000 | ↹70970960.0000 | ↹37853718.0000 | ↹4689165.3000 | ↹4864469.3000 | ↹102558460.0000 | ↹29903636.0000 | 1286832.3000 |
| x | | 205980.7800 | ↹1437379.3000 | ↹71001623.0000 | ↹37701701.0000 | ↹4700371.3000 | ↹4915213.8000 | ↹102788170.0000 | ↹30135673.0000 | ↹1290457.9000 |
| %RSD | | 0.942 | ↹0.539 | ↹1.158 | ↹0.975 | ↹0.524 | ↹1.020 | ↹0.579 | ↹1.760 | ↹1.313 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | 443557.3200 | 65.0003 | ↹7442175.7000 | ↹7015667.6000 | ↹3496661.5000 | ↹9195374.4000 | ↹58286839.0000 | 1444284.0000 | ↹9424150.6000 |
| 2 | 16:41:35 | 450566.2200 | 47.5001 | ↹7483326.7000 | ↹6981687.2000 | ↹3533590.4000 | ↹9340822.3000 | ↹58631448.0000 | 1485529.4000 | ↹9673437.8000 |
| 3 | 16:42:16 | 451672.5100 | 47.5001 | ↹7594116.8000 | ↹7131631.9000 | ↹3556060.4000 | ↹9462889.2000 | ↹59773473.0000 | 1493231.2000 | ↹9697365.8000 |
| 4 | 16:42:56 | 458305.3500 | 45.0001 | ↹7497504.9000 | ↹7085087.9000 | ↹3577511.5000 | ↹9434081.4000 | ↹59580357.0000 | 1487605.5000 | ↹9641934.4000 |
| 5 | 16:43:36 | 461920.7500 | 37.5001 | ↹7511235.0000 | ↹7079003.9000 | ↹3526751.7000 | ↹9222619.7000 | ↹59080389.0000 | 1460091.3000 | ↹9546017.5000 |
| x | | 453204.4300 | 48.5001 | ↹7505671.8000 | ↹7058615.7000 | ↹3538115.1000 | ↹9331157.4000 | ↹59070501.0000 | 1474148.3000 | ↹9596581.2000 |
| %RSD | | 1.577 | 20.811 | ↹0.743 | ↹0.844 | ↹0.864 | ↹1.293 | ↹1.058 | 1.425 | ↹1.170 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | 2095479.4000 | ↹4834955.4000 | ↹2287369.3000 | 1309857.6000 | 1061448.8000 | 29344.0740 | 11403.6310 | 140.0012 | 689336.1800 |
| 2 | 16:41:35 | ↹2093752.0000 | ↹4869535.7000 | ↹2308968.6000 | 1322794.8000 | 1061815.5000 | 29375.0160 | 11603.0720 | 145.8346 | 687178.4300 |
| 3 | 16:42:16 | 2143237.1000 | ↹4965141.1000 | ↹2334586.6000 | 1338306.0000 | 1086464.1000 | 30063.2970 | 11740.7650 | 129.1677 | 692533.1200 |
| 4 | 16:42:56 | 2136530.2000 | ↹4948145.3000 | ↹2348825.6000 | 1343553.4000 | 1079711.9000 | 29916.9390 | 11774.9800 | 139.1678 | 700827.9000 |
| 5 | 16:43:36 | 2119667.7000 | ↹4912402.7000 | ↹2326413.5000 | 1318895.7000 | 1066685.0000 | 29924.4650 | 11547.1610 | 150.8347 | 693352.2100 |
| x | | ↹2117733.3000 | ↹4906036.0000 | ↹2321232.7000 | 1326681.5000 | 1071225.1000 | 29724.7580 | 11613.9220 | 141.0012 | 692645.5700 |
| %RSD | | ↹1.076 | ↹1.102 | ↹1.025 | 1.052 | 1.053 | 1.139 | 1.297 | 5.767 | 0.751 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | 455.0124 | 177.5019 | 287.5050 | 80.0004 | 252.5038 | 773484.6600 | 603073.5800 | 77740.9360 | 577021.2200 |
| 2 | 16:41:35 | 410.0101 | 202.5025 | 277.5046 | 100.0006 | 257.5040 | 771108.9000 | 610393.7900 | 77844.3950 | 589835.8900 |
| 3 | 16:42:16 | 310.0058 | 177.5019 | 342.5070 | 70.0003 | 272.5045 | 779646.0600 | 628405.1900 | 79108.7170 | 604152.6900 |
| 4 | 16:42:56 | 262.5041 | 137.5011 | 320.0061 | 75.0003 | 260.0041 | 776709.9500 | 629667.8700 | 78687.2550 | 606945.0500 |
| 5 | 16:43:36 | 255.0039 | 187.5021 | 295.0052 | 107.5007 | 295.0052 | 780725.4300 | 608987.5400 | 77110.1150 | 585081.3900 |
| x | | 338.5073 | 176.5019 | 304.5056 | 86.5005 | 267.5043 | 776335.0000 | 616105.6000 | 78098.2840 | 592607.2500 |
| %RSD | | 26.525 | 13.645 | 8.677 | 18.908 | 6.373 | 0.523 | 1.968 | 1.020 | 2.145 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | 1199354.5000 | ↹2817364.9000 | 693433.5800 | 62.5002 | ↹3445726.4000 | 693203.0300 | 1225654.4000 | 1120002.5000 | ↹4850565.8000 |
| 2 | 16:41:35 | 1202502.1000 | ↹2838953.4000 | 693997.7700 | 72.5003 | ↹3459604.9000 | 694673.2200 | 1242028.9000 | 1125280.1000 | ↹4944432.4000 |
| 3 | 16:42:16 | 1223571.5000 | ↹2874939.6000 | 704058.9600 | 65.0003 | ↹3497516.7000 | 705848.7800 | 1256441.2000 | 1122106.9000 | ↹4985488.0000 |
| 4 | 16:42:56 | 1212066.8000 | ↹2857895.2000 | 701419.7200 | 87.5005 | ↹3507155.9000 | 708568.1600 | 1265165.2000 | 1143786.4000 | ↹5017660.4000 |
| 5 | 16:43:36 | 1201693.2000 | ↹2822690.3000 | 708212.2300 | 85.0004 | ↹3438069.9000 | 693485.1200 | 1235072.3000 | 1127850.3000 | ↹4880681.5000 |
| x | | 1207837.6000 | ↹2842368.7000 | 700224.4500 | 74.5003 | ↹3469614.7000 | 699155.6600 | 1244872.4000 | 1127805.3000 | ↹4935765.6000 |
| %RSD | | 0.832 | ↹0.848 | 0.917 | 15.268 | ↹0.895 | 1.063 | 1.282 | 0.835 | ↹1.416 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:40:55 | ↹11891423.0000 | ↹3870674.3000 | ↹3470814.0000 | ↹8581044.7000 | 758246.4000 | 0.0000 |
| 2 | 16:41:35 | ↹12013872.0000 | ↹3904949.6000 | ↹3488027.0000 | ↹8565315.8000 | 761552.1600 | 7.5000 |
| 3 | 16:42:16 | ↹12132217.0000 | ↹3958256.9000 | ↹3578201.1000 | ↹8755271.3000 | 763762.6300 | 2.5000 |
| 4 | 16:42:56 | ↹12127844.0000 | ↹3921250.2000 | ↹3512065.2000 | ↹8680378.6000 | 765671.4300 | 0.0000 |
| 5 | 16:43:36 | ↹11886485.0000 | ↹3826618.7000 | ↹3445717.6000 | ↹8508623.1000 | 771795.8300 | 2.5000 |
| x | | ↹12010368.0000 | ↹3896350.0000 | ↹3498965.0000 | ↹8618126.7000 | 764205.6900 | 2.5000 |
| %RSD | | ↹1.004 | ↹1.286 | ↹1.443 | ↹1.143 | 0.662 | 122.475 |

**CCB2** 06/17/2015 16:44:38

User.Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 226967.6700 | 275.8379 | 48970.9680 | 5716.9603 | 645.0250 | 690.0286 | 17012.3470 | 54477.4880 | 527.5167 |
| 2 | 16:45:59 | 229966.5600 | 195.0023 | 44621.6460 | 4601.2700 | 560.0188 | 575.0198 | 14021.7870 | 52532.5600 | 502.5152 |
| 3 | 16:46:39 | 231763.6600 | 168.3350 | 42020.6780 | 3775.8552 | 420.0106 | 465.0130 | 11355.2310 | 51591.7090 | 412.5102 |
| 4 | 16:47:20 | 234630.5700 | 150.0014 | 38998.5400 | 3005.5419 | 390.0091 | 405.0098 | 9743.1925 | 48488.1570 | 432.5112 |
| 5 | 16:48:00 | 236554.6700 | 114.1675 | 37192.8140 | 2360.3342 | 300.0054 | 355.0076 | 8041.3780 | 48953.3650 | 455.0124 |
| x | | 231976.6200 | 180.6688 | 42360.9290 | 3891.9923 | 463.0138 | 498.0158 | 12034.7870 | 51208.6560 | 466.0131 |
| %RSD | | 1.630 | 33.643 | 11.005 | 33.938 | 29.827 | 27.124 | 29.490 | 4.889 | 10.303 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 477769.1400 | 20.0000 | 1430.1227 | 2035.2485 | 3085.5711 | 1485.1323 | 108020.6000 | 1040.0649 | 1210.0879 |
| 2 | 16:45:59 | 483553.9000 | 27.5000 | 1097.5723 | 1870.2098 | 3003.0410 | 1162.5811 | 108947.5500 | 1110.0739 | 995.0594 |
| 3 | 16:46:39 | 496365.1800 | 25.0000 | 805.0389 | 1522.6391 | 2943.0196 | 875.0459 | 109671.9600 | 1042.5652 | 765.0351 |
| 4 | 16:47:20 | 496552.0900 | 27.5000 | 685.0282 | 1497.6346 | 2995.5383 | 730.0320 | 108585.3700 | 940.0530 | 610.0223 |
| 5 | 16:48:00 | 501084.1600 | 12.5000 | 772.5358 | 1352.6098 | 2702.9383 | 632.5240 | 109238.8200 | 890.0475 | 412.5102 |
| x | | 491064.8900 | 22.5000 | 958.0596 | 1655.6684 | 2946.0217 | 977.0631 | 108892.8600 | 1004.5609 | 798.5430 |
| %RSD | | 2.015 | 28.328 | 31.946 | 17.206 | 4.927 | 35.553 | 0.578 | 8.779 | 39.286 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 280.0047 | 3755.8462 | 1465.1288 | 612.5225 | 261.6708 | 1325.9388 | 169.1684 | 115.0008 | 737384.4100 |
| 2 | 16:45:59 | 230.0032 | 3478.2257 | 1462.6283 | 592.5211 | 175.0018 | 1235.9250 | 136.6678 | 135.8344 | 752874.3000 |
| 3 | 16:46:39 | 185.0021 | 3148.0945 | 1315.1038 | 570.0195 | 155.0014 | 1296.7676 | 158.3348 | 160.0015 | 762730.4600 |
| 4 | 16:47:20 | 132.5011 | 3073.0665 | 1165.0814 | 485.0141 | 129.1677 | 1330.1061 | 210.8360 | 189.1688 | 771201.9500 |
| 5 | 16:48:00 | 115.0008 | 3070.5656 | 1162.5811 | 495.0147 | 120.0009 | 1237.5919 | 120.0009 | 138.3345 | 766972.0100 |
| x | | 188.5024 | 3305.1597 | 1314.1047 | 551.0184 | 168.1685 | 1285.2659 | 159.0016 | 147.6680 | 758232.6300 |
| %RSD | | 36.220 | 9.160 | 11.417 | 10.488 | 33.643 | 3.588 | 21.810 | 19.060 | 1.779 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 20.0000 | 30.0001 | 15.0000 | 12.5000 | 7.5000 | 855285.9300 | 442.5118 | 10.0000 | 373.7584 |
| 2 | 16:45:59 | 35.0001 | 32.5001 | 10.0000 | 2.5000 | 7.5000 | 870751.2100 | 300.0054 | 10.0000 | 281.2548 |
| 3 | 16:46:39 | 10.0000 | 10.0000 | 15.0000 | 10.0000 | 12.5000 | 880350.5200 | 242.5035 | 15.0000 | 228.7531 |
| 4 | 16:47:20 | 37.5001 | 15.0000 | 15.0000 | 5.0000 | 7.5000 | 877086.8000 | 230.0032 | 12.5000 | 211.2527 |
| 5 | 16:48:00 | 22.5000 | 7.5000 | 5.0000 | 0.0000 | 7.5000 | 890118.4700 | 120.0009 | 7.5000 | 127.5010 |
| x | | 25.0000 | 19.0000 | 12.0000 | 6.0000 | 8.5000 | 874718.5900 | 267.0049 | 11.0000 | 244.5040 |
| %RSD | | 45.277 | 60.726 | 37.268 | 86.402 | 26.307 | 1.477 | 44.105 | 25.913 | 37.205 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 163.7516 | 437.5115 | 745454.7100 | 37.5001 | 2562.8940 | 110.0007 | 167.5017 | 1196113.2000 | 1483.8821 |
| 2 | 16:45:59 | 153.7514 | 280.0047 | 760516.1600 | 47.5001 | 1815.1977 | 72.5003 | 117.5008 | 1220239.4000 | 976.3072 |
| 3 | 16:46:39 | 106.2507 | 317.5061 | 776066.4400 | 35.0001 | 1477.6310 | 77.5004 | 122.5009 | 1229798.6000 | 750.0338 |
| 4 | 16:47:20 | 68.7503 | 187.5021 | 779509.0900 | 77.5004 | 1067.5684 | 55.0002 | 92.5005 | 1246030.5000 | 546.2679 |
| 5 | 16:48:00 | 48.7501 | 125.0009 | 790078.3100 | 55.0002 | 1012.5615 | 35.0001 | 60.0002 | 1260093.5000 | 405.0098 |
| x | | 108.2508 | 269.5051 | 770324.9400 | 50.5002 | 1587.1705 | 70.0003 | 112.0008 | 1230455.0000 | 832.3002 |
| %RSD | | 46.775 | 44.775 | 2.269 | 33.831 | 40.049 | 39.850 | 35.448 | 1.993 | 50.849 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:45:19 | 3607.0305 | 702.5296 | 575.0198 | 1400.1176 | 857195.4900 | 2.5000 |
| 2 | 16:45:59 | 2557.8925 | 537.5173 | 417.5105 | 1195.0857 | 877838.9000 | 2.5000 |
| 3 | 16:46:39 | 1651.4136 | 430.0111 | 375.0084 | 835.0418 | 894150.2600 | 2.5000 |
| 4 | 16:47:20 | 1291.3500 | 277.5046 | 275.0045 | 717.5309 | 906126.1200 | 2.5000 |
| 5 | 16:48:00 | 1076.3195 | 257.5040 | 305.0056 | 632.5240 | 904323.9800 | 2.5000 |
| x | | 2036.8012 | 441.0133 | 389.5098 | 956.0600 | 887926.9500 | 2.5000 |
| %RSD | | 51.281 | 42.153 | 30.285 | 34.316 | 2.311 | 0.000 |

**MF9M28-5x** 06/17/2015 16:49:02

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 229147.7900 | 715.8641 | 226918.0100 | τ2647040.2000 | 317090.1400 | 341225.9500 | τ61465069.0000 | τ2379061.7000 | 105285.9300 |
| 2 | 16:50:22 | 226437.7000 | 750.8672 | 234940.7900 | τ2668948.7000 | 320081.2900 | 345574.7600 | τ61601217.0000 | τ2424047.1000 | 107108.9400 |
| 3 | 16:51:03 | 226537.0200 | 702.5296 | 232586.1100 | τ2705652.6000 | 321816.2300 | 343017.2900 | τ61761915.0000 | τ2420973.7000 | 105432.7700 |
| 4 | 16:51:43 | 228406.1800 | 725.0315 | 230974.7000 | τ2696405.5000 | 319104.9000 | 341928.9000 | τ61221221.0000 | τ2436855.3000 | 105189.7300 |
| 5 | 16:52:23 | 227816.1900 | 714.1973 | 226178.3000 | τ2653513.2000 | 314795.5500 | 335942.6600 | τ60463962.0000 | τ2372500.8000 | 104721.3900 |
| x | | 227668.9800 | 721.6979 | 230319.5800 | τ2674312.0000 | 318577.6200 | 341537.9100 | τ61302677.0000 | τ2406687.7000 | 105547.7500 |
| %RSD | | 0.517 | 2.517 | 1.619 | τ0.967 | 0.853 | 1.036 | τ0.830 | τ1.202 | 0.864 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 502545.8600 | 26569.7900 | 144290.9700 | 95797.4830 | τ1827854.9000 | 1167591.0000 | τ31444414.0000 | 749155.5200 | 37441.4230 |
| 2 | 16:50:22 | 505645.1600 | 27329.7420 | 145242.2800 | 98243.2100 | 1821993.7000 | 1183116.7000 | τ31514029.0000 | 769368.5400 | 37823.1410 |
| 3 | 16:51:03 | 512366.3800 | 26537.1860 | 144675.0400 | 97577.9620 | τ1814777.7000 | 1173260.7000 | τ31480181.0000 | 761959.4900 | 37619.7230 |
| 4 | 16:51:43 | 513351.8400 | 26166.0150 | 143787.3800 | 96589.0410 | 1794420.4000 | 1165770.6000 | τ31239836.0000 | 751981.3200 | 36904.0340 |
| 5 | 16:52:23 | 511256.2100 | 26655.0610 | 141966.5600 | 95185.5300 | 1779127.3000 | 1144577.3000 | τ30757393.0000 | 742958.3600 | 36786.0140 |
| x | | 509033.0900 | 26651.5590 | 143992.4500 | 96678.6450 | τ1807634.8000 | 1166863.2000 | τ31287171.0000 | 755084.6500 | 37314.8670 |
| %RSD | | 0.923 | 1.587 | 0.869 | 1.295 | τ1.125 | 1.215 | τ1.006 | 1.394 | 1.210 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 16884.5880 | 33226.1070 | 16223.2760 | 29266.3010 | 2023.5790 | 1188.4181 | 173.3351 | 134.1678 | 807156.9800 |
| 2 | 16:50:22 | 17027.3780 | 33050.4100 | 16045.4320 | 29712.8770 | 2082.7602 | 1295.1006 | 183.3354 | 134.1678 | 813171.6900 |
| 3 | 16:51:03 | 16942.2050 | 33795.8910 | 16195.7230 | 29529.7280 | 2079.4261 | 1189.2515 | 177.5019 | 165.8350 | 805634.7100 |
| 4 | 16:51:43 | 16689.1950 | 34200.0350 | 16180.6940 | 29181.0030 | 2021.9119 | 1183.4174 | 187.5021 | 160.8349 | 820679.4000 |
| 5 | 16:52:23 | 16586.4900 | 32606.1650 | 15699.7750 | 28546.3100 | 2077.7590 | 1151.7463 | 203.3358 | 169.1684 | 809776.2200 |
| x | | 16825.9710 | 33375.7220 | 16068.9800 | 29247.2440 | 2057.0872 | 1201.5868 | 185.0021 | 152.8348 | 811283.8000 |
| %RSD | | 1.086 | 1.881 | 1.354 | 1.522 | 1.527 | 4.536 | 6.266 | 11.317 | 0.737 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 14284.7330 | 212.5027 | 2437.8565 | 152.5014 | 370.0082 | 862417.8100 | 248.7537 | 85.0004 | 155.0014 |
| 2 | 16:50:22 | 14607.7920 | 340.0069 | 2532.8849 | 152.5014 | 415.0103 | 873796.5900 | 231.2532 | 105.0007 | 175.0018 |
| 3 | 16:51:03 | 14377.3920 | 265.0042 | 2502.8758 | 140.0012 | 405.0098 | 878474.7000 | 266.2543 | 90.0005 | 155.0014 |
| 4 | 16:51:43 | 14031.8040 | 235.0033 | 2500.3751 | 165.0016 | 415.0103 | 887269.8700 | 231.2532 | 117.5008 | 141.2512 |
| 5 | 16:52:23 | 13688.7340 | 240.0035 | 2570.3964 | 155.0014 | 340.0069 | 881414.6800 | 182.5020 | 122.5009 | 148.7513 |
| x | | 14198.0910 | 258.5041 | 2508.8777 | 153.0014 | 389.0091 | 876674.7300 | 232.0033 | 104.0007 | 155.0015 |
| %RSD | | 2.477 | 19.045 | 1.944 | 5.823 | 8.497 | 1.066 | 13.468 | 15.818 | 8.085 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 95.0005 | 240.0035 | 760128.0300 | 207.5026 | 620.0231 | 37569.4980 | 66514.3950 | 1227904.9000 | 710.0303 |
| 2 | 16:50:22 | 83.7504 | 190.0022 | 780593.9300 | 207.5026 | 592.5211 | 38694.6280 | 66715.9970 | 1240101.0000 | 735.0324 |
| 3 | 16:51:03 | 61.2502 | 150.0014 | 780130.9400 | 197.5023 | 560.0188 | 38898.0720 | 68122.3050 | 1247717.1000 | 692.5288 |
| 4 | 16:51:43 | 68.7503 | 215.0028 | 777405.5400 | 177.5019 | 455.0124 | 38880.4900 | 66897.4430 | 1248843.6000 | 641.2747 |
| 5 | 16:52:23 | 96.2506 | 187.5021 | 777315.1700 | 147.5013 | 447.5120 | 37393.7100 | 65176.3850 | 1243001.7000 | 667.5267 |
| x | | 81.0004 | 196.5024 | 775114.7200 | 187.5021 | 535.0175 | 38287.2800 | 66685.3050 | 1241513.7000 | 689.2786 |
| %RSD | | 19.287 | 17.107 | 1.098 | 13.598 | 14.840 | 1.939 | 1.576 | 0.676 | 5.287 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:49:42 | 1915.2201 | 56609.1250 | 46235.4080 | 116704.0100 | 863687.2300 | 0.0000 |
| 2 | 16:50:22 | 1797.6939 | 56312.1230 | 46454.1190 | 116871.3300 | 871127.6700 | 2.5000 |
| 3 | 16:51:03 | 1631.4097 | 56254.2340 | 46775.9120 | 115469.4900 | 869787.9800 | 0.0000 |
| 4 | 16:51:43 | 1531.3907 | 55539.4630 | 46079.5480 | 115613.9700 | 871189.9600 | 0.0000 |
| 5 | 16:52:23 | 1412.6197 | 54419.6110 | 45023.8010 | 110662.4200 | 872233.6300 | 0.0000 |
| x | | 1657.6668 | 55826.9110 | 46113.7580 | 115064.2400 | 869605.2900 | 0.5000 |
| %RSD | | 12.164 | 1.575 | 1.438 | 2.207 | 0.393 | 223.607 |

**MF9M29-5x** 06/17/2015 16:53:25

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 225041.4700 | 1257.5949 | ↹1101377.1000 | ↹5228829.1000 | 631515.1000 | 671155.7800 | ↹125376680.0000 | ↹4012814.6000 | 311552.0100 |
| 2 | 16:54:45 | 227843.5900 | 1290.0999 | ↹1098034.1000 | ↹5285924.0000 | 630319.4700 | 685446.6500 | ↹127630470.0000 | ↹4130095.5000 | 320042.3400 |
| 3 | 16:55:26 | 227904.3800 | 1230.9242 | ↹1121435.3000 | ↹5379201.1000 | 646015.8200 | 686568.6100 | ↹128044900.0000 | ↹4139617.0000 | 324741.4900 |
| 4 | 16:56:06 | 226219.3900 | 1285.0991 | ↹1097797.7000 | ↹5317909.5000 | 642924.9700 | 685511.6900 | ↹127617250.0000 | ↹4141486.1000 | 324957.1600 |
| 5 | 16:56:46 | 226392.3300 | 1241.7592 | ↹1087408.4000 | ↹5265722.7000 | 630718.0000 | 671182.8300 | ↹124582780.0000 | ↹4064473.9000 | 316202.3400 |
| x | | 226680.2300 | 1261.0954 | ↹1101210.5000 | ↹5295517.3000 | 636298.6700 | 679973.1100 | ↹126650420.0000 | ↹4097697.4000 | 319499.0700 |
| %RSD | | 0.533 | 2.065 | ↹1.132 | ↹1.074 | 1.187 | 1.184 | ↹1.232 | ↹1.393 | 1.795 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 514959.1000 | 27038.7950 | 246587.6400 | 180414.5500 | ↹3311877.4000 | ↹2870929.2000 | ↹56438335.0000 | 1375105.1000 | 54927.9300 |
| 2 | 16:54:45 | 512885.6600 | 26787.9870 | 246551.5900 | 181530.9000 | ↹3385372.4000 | ↹2926605.6000 | ↹57401786.0000 | 1408225.7000 | 55260.1150 |
| 3 | 16:55:26 | 517573.8600 | 27294.6270 | 247540.2600 | 185343.4600 | ↹3411191.9000 | ↹2956529.5000 | ↹57907845.0000 | 1422017.5000 | 56067.9850 |
| 4 | 16:56:06 | 514350.6900 | 26953.5190 | 248500.7200 | 180971.4300 | ↹3334249.7000 | ↹2922615.8000 | ↹57393597.0000 | 1401812.2000 | 54766.8750 |
| 5 | 16:56:46 | 513666.6200 | 26883.2930 | 244397.0000 | 180935.6700 | ↹3329434.7000 | ↹2881517.6000 | ↹56564349.0000 | 1374372.7000 | 54766.8750 |
| x | | 514687.1900 | 26991.6440 | 246715.4400 | 181839.2000 | ↹3354425.2000 | ↹2911639.5000 | ↹57141183.0000 | 1396306.6000 | 55157.9560 |
| %RSD | | 0.348 | 0.714 | 0.618 | 1.099 | ↹1.249 | ↹1.205 | ↹1.088 | 1.504 | 0.992 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 30846.9870 | 63614.3840 | 30096.7510 | 36685.5730 | 2626.2471 | 1180.9170 | 162.5016 | 164.1683 | 785762.4600 |
| 2 | 16:54:45 | 32006.3470 | 64831.2080 | 30846.9870 | 37436.4010 | 2670.4278 | 1150.9128 | 181.6687 | 166.6683 | 795916.6100 |
| 3 | 16:55:26 | 31951.1350 | 64780.8180 | 31035.1840 | 37885.9250 | 2653.7558 | 1160.0807 | 187.5021 | 156.6681 | 793114.9400 |
| 4 | 16:56:06 | 31690.1420 | 66060.8080 | 30769.2000 | 37577.0310 | 2634.5831 | 1132.5770 | 163.3349 | 142.5012 | 790632.3400 |
| 5 | 16:56:46 | 31045.2210 | 62961.9570 | 29848.3600 | 37112.4560 | 2624.5799 | 1112.5743 | 190.8355 | 128.3343 | 805055.0000 |
| x | | 31507.9660 | 64449.8350 | 30519.2960 | 37339.4770 | 2641.9187 | 1147.4124 | 177.1686 | 151.6681 | 794096.2700 |
| %RSD | | 1.686 | 1.862 | 1.690 | 1.230 | 0.746 | 2.276 | 7.574 | 10.605 | 0.903 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 21134.2650 | 280.0047 | 3933.4281 | 190.0022 | 467.5131 | 836298.6900 | 263.7542 | 177.5019 | 156.2515 |
| 2 | 16:54:45 | 21384.9040 | 350.0074 | 4060.9893 | 170.0017 | 525.0165 | 853039.7600 | 271.2544 | 152.5014 | 156.2515 |
| 3 | 16:55:26 | 21993.9860 | 310.0058 | 4063.4905 | 185.0021 | 460.0127 | 851401.7800 | 303.7555 | 165.0016 | 168.7517 |
| 4 | 16:56:06 | 21831.0580 | 250.0038 | 3670.8083 | 187.5021 | 510.0156 | 852683.4100 | 296.2553 | 152.5014 | 183.7520 |
| 5 | 16:56:46 | 21490.1740 | 280.0047 | 3928.4257 | 180.0019 | 505.0153 | 853141.9700 | 312.5059 | 182.5020 | 142.5012 |
| x | | 21566.8770 | 294.0053 | 3931.4284 | 182.5020 | 493.5147 | 849313.1200 | 289.5051 | 166.0017 | 161.5016 |
| %RSD | | 1.603 | 12.863 | 4.065 | 4.332 | 5.727 | 0.860 | 7.274 | 8.358 | 9.611 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 85.0004 | 210.0027 | 743986.8200 | 210.0027 | 275.0045 | 67202.3810 | 115771.1300 | 1182824.2000 | 922.5511 |
| 2 | 16:54:45 | 78.7504 | 150.0014 | 753835.6500 | 217.5028 | 272.5045 | 68767.5730 | 119526.0900 | 1201441.8000 | 875.0459 |
| 3 | 16:55:26 | 68.7503 | 152.5014 | 754289.0600 | 190.0022 | 225.0030 | 68263.4530 | 120061.2000 | 1178243.2000 | 910.0497 |
| 4 | 16:56:06 | 70.0003 | 132.5011 | 753770.1000 | 162.5016 | 240.0035 | 68230.6870 | 119678.2500 | 1182084.4000 | 943.8034 |
| 5 | 16:56:46 | 73.7503 | 137.5011 | 754332.7600 | 155.0014 | 257.5040 | 66710.9570 | 116881.4700 | 1194390.3000 | 891.2977 |
| x | | 75.2503 | 156.5015 | 752042.8800 | 187.0021 | 254.0039 | 67835.0100 | 118383.6300 | 1187796.8000 | 908.5496 |
| %RSD | | 8.899 | 19.843 | 0.600 | 14.869 | 8.427 | 1.249 | 1.629 | 0.819 | 2.944 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:54:05 | 2160.2800 | 60597.0220 | 51347.7090 | 128439.7400 | 824275.9800 | 2.5000 |
| 2 | 16:54:45 | 2219.0454 | 63521.1770 | 52806.7850 | 131250.5300 | 831516.2800 | 5.0000 |
| 3 | 16:55:26 | 2139.0245 | 63584.1550 | 52416.8350 | 131644.1600 | 832325.1100 | 0.0000 |
| 4 | 16:56:06 | 2172.7832 | 63221.4110 | 52260.8600 | 129323.2400 | 831248.9800 | 0.0000 |
| 5 | 16:56:46 | 2251.5541 | 61989.7090 | 50603.1760 | 129605.0700 | 837729.7800 | 0.0000 |
| x | | 2188.5374 | 62582.6950 | 51887.0730 | 130052.5500 | 831419.2200 | 1.5000 |
| %RSD | | 2.094 | 2.050 | 1.725 | 1.039 | 0.576 | 149.071 |

MF9M30-5x 06/17/2015 16:57:48

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 224383.2400 | 1565.9805 | 465801.8400 | ↹5376877.5000 | 645508.7000 | 694464.3400 | ↹141378020.0000 | ↹4461314.5000 | 158673.9000 |
| 2 | 16:59:09 | 229581.1500 | 1542.6428 | 477398.7900 | ↹5417588.4000 | 644963.8400 | 691567.6800 | ↹142721390.0000 | ↹4559979.0000 | 159861.2700 |
| 3 | 16:59:49 | 224951.5900 | 1544.3097 | 477650.0900 | ↹5428803.5000 | 664859.8900 | 695679.7000 | ↹141866140.0000 | ↹4578382.1000 | 161785.3700 |
| 4 | 17:00:30 | 227249.3600 | 1609.3220 | 477078.7200 | ↹5517172.5000 | 649944.3600 | 693883.8400 | ↹142448050.0000 | ↹4604036.2000 | 163100.6400 |
| 5 | 17:01:10 | 226956.5400 | 1534.3079 | 466311.7000 | ↹5354447.4000 | 646873.6900 | 694410.0800 | ↹141439460.0000 | ↹4559866.1000 | 162690.2300 |
| x | | 226624.3700 | 1559.3126 | 472848.2300 | ↹5418977.9000 | 650430.0900 | 694001.1300 | ↹141970610.0000 | ↹4552715.6000 | 161222.2800 |
| %RSD | | 0.911 | 1.943 | 1.312 | ↹1.155 | 1.275 | 0.218 | ↹0.422 | ↹1.191 | 1.175 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 511543.0400 | 38197.3420 | 298390.7600 | 212284.8900 | ↹4050985.8000 | ↹3901159.7000 | ↹68425613.0000 | ↹1704671.1000 | 83420.4590 |
| 2 | 16:59:09 | 518086.8100 | 39219.5740 | 298281.9700 | 214359.4900 | ↹4054698.2000 | ↹3923731.6000 | ↹68622222.0000 | ↹1717083.2000 | 82642.7680 |
| 3 | 16:59:49 | 516480.2900 | 39920.3900 | 298341.5400 | 214208.1700 | ↹4053302.6000 | ↹3944908.4000 | ↹70078156.0000 | 1706223.2000 | 84369.9460 |
| 4 | 17:00:30 | 517504.7600 | 38777.5120 | 297116.4200 | 213851.6900 | ↹4053107.2000 | ↹3909725.3000 | ↹68628561.0000 | 1685545.1000 | 84061.8560 |
| 5 | 17:01:10 | 520197.3900 | 39086.4510 | 297580.0300 | 212341.3000 | ↹4031977.0000 | ↹3936831.1000 | ↹69015220.0000 | 1690014.3000 | 83420.4590 |
| x | | 516762.4600 | 39040.2540 | 297942.1400 | 213409.1100 | ↹4048814.1000 | ↹3923271.2000 | ↹68953954.0000 | ↹1700707.4000 | 83583.0980 |
| %RSD | | 0.623 | 1.614 | 0.191 | 0.477 | ↹0.235 | ↹0.464 | ↹0.963 | ↹0.754 | 0.799 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 36951.7450 | 49368.3020 | 24410.7010 | 35746.5050 | 4383.6527 | 1059.2340 | 185.0021 | 176.6685 | 813936.2000 |
| 2 | 16:59:09 | 37240.5260 | 50912.5520 | 24606.2750 | 36123.1230 | 4522.8937 | 1130.9101 | 180.0019 | 157.5015 | 836684.7000 |
| 3 | 16:59:49 | 37602.1440 | 51249.6080 | 24628.8410 | 36552.4900 | 4392.8242 | 1089.2378 | 174.1685 | 170.8351 | 822677.7800 |
| 4 | 17:00:30 | 37453.9790 | 50749.0590 | 24350.5250 | 35964.9420 | 4429.5103 | 1188.4181 | 220.0029 | 156.6681 | 830764.0100 |
| 5 | 17:01:10 | 37225.4590 | 50356.6890 | 24240.2040 | 35723.9080 | 4384.4865 | 1164.2480 | 168.3350 | 174.1685 | 838270.2900 |
| x | | 37294.7710 | 50527.2420 | 24447.3090 | 36022.1930 | 4422.6735 | 1126.4096 | 185.5021 | 167.1684 | 828466.6000 |
| %RSD | | 0.664 | 1.431 | 0.684 | 0.941 | 1.336 | 4.696 | 10.929 | 5.647 | 1.227 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 24704.0630 | 250.0038 | 4373.6474 | 165.0016 | 415.0103 | 837385.0800 | 257.5040 | 157.5015 | 116.2508 |
| 2 | 16:59:09 | 24681.4970 | 297.5053 | 4476.2019 | 172.5018 | 507.5155 | 852962.4100 | 268.7543 | 172.5018 | 138.7512 |
| 3 | 16:59:49 | 24360.5540 | 285.0049 | 4608.7741 | 190.0022 | 492.5146 | 849819.3200 | 287.5050 | 170.0017 | 121.2509 |
| 4 | 17:00:30 | 25366.0480 | 332.5066 | 4373.6474 | 197.5023 | 477.5137 | 848328.2700 | 315.0060 | 152.5014 | 140.0012 |
| 5 | 17:01:10 | 24360.5540 | 267.5043 | 4576.2562 | 177.5019 | 512.5158 | 853227.6100 | 285.0049 | 172.5018 | 138.7512 |
| x | | 24694.5430 | 286.5050 | 4481.7054 | 180.5020 | 481.0140 | 848344.5400 | 282.7548 | 165.0016 | 131.0010 |
| %RSD | | 1.663 | 10.944 | 2.456 | 7.290 | 8.182 | 0.763 | 7.711 | 5.669 | 8.651 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 45.0001 | 97.5006 | 744095.9500 | 237.5034 | 190.0022 | 114080.5500 | 201904.1400 | 1168724.7000 | 1061.3176 |
| 2 | 16:59:09 | 51.2502 | 117.5008 | 749270.1800 | 277.5046 | 182.5020 | 115261.6400 | 203241.0600 | 1194760.7000 | 1012.5615 |
| 3 | 16:59:49 | 42.5001 | 80.0004 | 742819.2400 | 222.5030 | 190.0022 | 116485.9900 | 204634.5400 | 1182746.8000 | 1078.8198 |
| 4 | 17:00:30 | 50.0001 | 77.5004 | 756346.0500 | 275.0045 | 180.0019 | 116485.9900 | 204252.8500 | 1191987.5000 | 986.3084 |
| 5 | 17:01:10 | 46.2501 | 92.5005 | 763304.6300 | 195.0023 | 162.5016 | 114587.4400 | 201701.8300 | 1205574.7000 | 953.8046 |
| x | | 47.0001 | 93.0005 | 751167.2100 | 241.5036 | 181.0020 | 115380.3200 | 203146.8800 | 1188758.9000 | 1018.5624 |
| %RSD | | 7.662 | 17.255 | 1.148 | 14.578 | 6.223 | 0.947 | 0.655 | 1.165 | 5.085 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 16:58:28 | 2516.6299 | 24114.8410 | 19342.4220 | 49204.8390 | 820493.6300 | 0.0000 |
| 2 | 16:59:09 | 2441.6076 | 24027.0880 | 19836.0800 | 50537.7810 | 830996.8500 | 2.5000 |
| 3 | 16:59:49 | 2494.1232 | 24503.4720 | 19976.4150 | 51448.3270 | 825461.3900 | 2.5000 |
| 4 | 17:00:30 | 2415.3500 | 24766.7490 | 20219.5000 | 50190.6930 | 830572.5100 | 0.0000 |
| 5 | 17:01:10 | 2435.3558 | 24302.8860 | 19926.2950 | 51116.2930 | 844945.3500 | 2.5000 |
| x | | 2460.6133 | 24343.0070 | 19860.1420 | 50499.5870 | 830493.9500 | 1.5000 |
| %RSD | | 1.737 | 1.230 | 1.623 | 1.730 | 1.101 | 91.287 |

**MF9M31-5x** 06/17/2015 17:02:15

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 225806.7600 | 571.6863 | 176016.9900 | τ2625511.1000 | 320372.1500 | 343772.4700 | τ75848561.0000 | τ3096935.0000 | 298162.8200 |
| 2 | 17:03:37 | 225009.8000 | 572.5197 | 177914.1500 | τ2715302.7000 | 320559.1400 | 347533.7600 | τ76507819.0000 | τ3171563.7000 | 306380.4700 |
| 3 | 17:04:18 | 224861.7100 | 551.6849 | 179162.9800 | τ2745130.6000 | 328192.8300 | 352474.9300 | τ76503237.0000 | τ3203778.6000 | 309453.4500 |
| 4 | 17:04:58 | 228198.9500 | 516.6827 | 175611.0600 | τ2684265.7000 | 327449.4300 | 345751.8900 | τ76100641.0000 | τ3204631.7000 | 306012.3100 |
| 5 | 17:05:38 | 226608.9300 | 548.3514 | 175863.8100 | τ2698088.9000 | 321800.6400 | 346314.5400 | τ76185169.0000 | τ3152495.7000 | 307791.0500 |
| x | | 226097.2300 | 552.1850 | 176913.8000 | τ2693659.8000 | 323674.8400 | 347169.5200 | τ76229085.0000 | τ3165880.9000 | 305560.0200 |
| %RSD | | 0.605 | 4.119 | 0.879 | τ1.647 | 1.184 | 0.940 | τ0.369 | τ1.404 | 1.424 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 496667.4100 | 46290.7140 | 169430.0600 | 112524.6100 | τ2027767.8000 | 773035.7400 | τ35306311.0000 | 850918.4500 | 27904.1400 |
| 2 | 17:03:37 | 499079.0400 | 46700.4910 | 174822.2300 | 114341.6000 | τ2095819.7000 | 785296.4600 | τ35838566.0000 | 865504.5600 | 28157.4900 |
| 3 | 17:04:18 | 501688.9700 | 47746.3920 | 176277.4100 | 115781.2700 | τ2113028.1000 | 800242.9700 | τ36429789.0000 | 876025.9300 | 29108.2490 |
| 4 | 17:04:58 | 502260.6600 | 47552.7900 | 172701.1900 | 113976.6500 | τ2084263.7000 | 794237.1500 | τ35888626.0000 | 866500.5200 | 28611.5330 |
| 5 | 17:05:38 | 496346.6200 | 46856.3620 | 172292.8700 | 112810.9400 | τ2077522.7000 | 779793.9800 | τ35594272.0000 | 855874.5100 | 28215.1850 |
| x | | 499208.5400 | 47029.3500 | 173104.7500 | 113887.0100 | τ2079680.4000 | 786521.2600 | τ35811513.0000 | 862964.7900 | 28399.3200 |
| %RSD | | 0.550 | 1.290 | 1.510 | 1.146 | τ1.538 | 1.388 | τ1.161 | 1.137 | 1.656 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 17716.3120 | 38521.3280 | 18134.7110 | 24510.9940 | 1525.1396 | 1093.4051 | 199.1691 | 155.0014 | 777222.0600 |
| 2 | 17:03:37 | 18147.2380 | 38659.4660 | 18585.7030 | 24992.4210 | 1563.4800 | 1060.9009 | 181.6687 | 124.1676 | 788090.1200 |
| 3 | 17:04:18 | 17886.6750 | 39257.2510 | 18568.1640 | 26098.3030 | 1637.6609 | 1160.0807 | 183.3354 | 166.6683 | 784731.8000 |
| 4 | 17:04:58 | 17981.8800 | 39450.6610 | 18663.3760 | 25198.0390 | 1564.3135 | 1112.5743 | 197.5023 | 157.5015 | 789760.1700 |
| 5 | 17:05:38 | 17701.2800 | 38548.9560 | 18335.1480 | 25488.9220 | 1549.3107 | 1123.4091 | 192.5022 | 155.0014 | 782451.6200 |
| x | | 17886.6770 | 38887.5320 | 18457.4200 | 25257.7360 | 1567.9809 | 1110.0740 | 190.8355 | 151.6681 | 784451.1500 |
| %RSD | | 1.047 | 1.117 | 1.182 | 2.335 | 2.682 | 3.304 | 4.200 | 10.619 | 0.630 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 16804.4260 | 310.0058 | 2975.5311 | 170.0017 | 522.5164 | 846856.7900 | 212.5027 | 140.0012 | 135.0011 |
| 2 | 17:03:37 | 16711.7400 | 377.5086 | 3285.6476 | 170.0017 | 482.5140 | 853443.0900 | 233.7533 | 165.0016 | 140.0012 |
| 3 | 17:04:18 | 16714.2450 | 297.5053 | 3295.6516 | 240.0035 | 505.0153 | 860100.6900 | 248.7537 | 122.5009 | 145.0013 |
| 4 | 17:04:58 | 16621.5600 | 320.0061 | 3078.0684 | 222.5030 | 490.0144 | 845865.8300 | 263.7542 | 135.0011 | 145.0013 |
| 5 | 17:05:38 | 16373.5700 | 350.0074 | 3203.1155 | 185.0021 | 510.0156 | 865299.8500 | 242.5035 | 107.5007 | 137.5011 |
| x | | 16645.1080 | 331.0066 | 3167.6028 | 197.5024 | 502.0151 | 854313.2500 | 240.2535 | 134.0011 | 140.5012 |
| %RSD | | 0.991 | 9.799 | 4.366 | 16.211 | 3.177 | 0.983 | 7.903 | 15.973 | 3.183 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 81.2504 | 142.5012 | 750277.5400 | 302.5055 | 207.5026 | 41364.9090 | 71833.2720 | 1186604.3000 | 641.2747 |
| 2 | 17:03:37 | 71.2503 | 167.5017 | 759873.8400 | 227.5031 | 177.5019 | 41932.7360 | 72884.8440 | 1213515.4000 | 611.2724 |
| 3 | 17:04:18 | 73.7503 | 170.0017 | 757387.0200 | 257.5040 | 127.5010 | 42033.2410 | 74256.8780 | 1209260.9000 | 622.5233 |
| 4 | 17:04:58 | 53.7502 | 147.5013 | 757969.0400 | 297.5053 | 137.5011 | 41917.6610 | 73696.9400 | 1203240.7000 | 618.7730 |
| 5 | 17:05:38 | 67.5003 | 132.5011 | 763531.5800 | 302.5055 | 127.5010 | 41533.2430 | 72970.5900 | 1213339.9000 | 585.0205 |
| x | | 69.5003 | 152.0014 | 757807.8100 | 277.5047 | 155.5015 | 41756.3580 | 73128.5050 | 1205192.3000 | 615.7728 |
| %RSD | | 14.589 | 10.685 | 0.639 | 12.154 | 22.918 | 0.695 | 1.253 | 0.929 | 3.319 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:02:57 | 1488.8830 | 52834.4600 | 43146.4080 | 108790.5200 | 834450.1900 | 0.0000 |
| 2 | 17:03:37 | 1535.1414 | 54032.1020 | 44709.6160 | 111898.7700 | 852002.5200 | 2.5000 |
| 3 | 17:04:18 | 1517.6382 | 53850.9350 | 44795.0730 | 112197.7500 | 854209.7400 | 5.0000 |
| 4 | 17:04:58 | 1402.6180 | 53828.2890 | 44262.2370 | 110360.9700 | 852285.6400 | 2.5000 |
| 5 | 17:05:38 | 1450.1262 | 53956.6150 | 45016.2600 | 109623.8300 | 848999.2100 | 2.5000 |
| x | | 1478.8814 | 53700.4800 | 44385.9190 | 110574.3700 | 848389.4600 | 2.5000 |
| %RSD | | 3.611 | 0.914 | 1.679 | 1.320 | 0.944 | 70.711 |

**MF9M32-5x** 06/17/2015 17:06:41

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 224325.8900 | 950.8876 | 182588.6400 | ↹2631936.6000 | 307256.8700 | 329123.4800 | ↹72269318.0000 | ↹2657630.4000 | 224953.3000 |
| 2 | 17:08:02 | 226504.4800 | 991.7257 | 183613.2900 | ↹2609648.8000 | 312029.3800 | 334392.1300 | ↹72431879.0000 | ↹2676773.7000 | 223856.8600 |
| 3 | 17:08:42 | 225461.7700 | 935.8859 | 183436.9700 | ↹2609743.6000 | 316088.1300 | 335432.7200 | ↹72887821.0000 | ↹2699241.3000 | 226948.8300 |
| 4 | 17:09:23 | 224862.5700 | 924.2179 | 184497.5000 | ↹2604977.8000 | 310197.8700 | 332378.9400 | ↹71615735.0000 | ↹2654142.9000 | 229271.1200 |
| 5 | 17:10:03 | 230153.2700 | 958.3884 | 182460.8900 | ↹2570905.8000 | 309720.6000 | 327418.2400 | ↹70705129.0000 | ↹2605456.8000 | 224213.7700 |
| x | | 226261.6000 | 952.2211 | 183319.4600 | ↹2605442.5000 | 311058.5700 | 331749.1000 | ↹71981976.0000 | ↹2658649.0000 | 225848.7800 |
| %RSD | | 1.026 | 2.704 | 0.453 | ↹0.843 | 1.057 | 1.029 | ↹1.177 | ↹1.307 | 0.999 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 494353.2100 | 52064.6370 | 175539.5800 | 116736.9600 | ↹2262823.2000 | ↹2545645.4000 | ↹38972440.0000 | 940212.6400 | 67174.6590 |
| 2 | 17:08:02 | 500352.0700 | 52152.6850 | 177436.6300 | 117396.1300 | ↹2294630.0000 | ↹2552802.0000 | ↹39323387.0000 | 952628.6000 | 67686.2740 |
| 3 | 17:08:42 | 500739.3300 | 52130.0440 | 177786.4700 | 117459.5100 | ↹2305976.7000 | ↹2558228.7000 | ↹39208076.0000 | 944842.5000 | 68001.3230 |
| 4 | 17:09:23 | 504473.5000 | 52675.9610 | 176642.5200 | 116521.4800 | ↹2286605.0000 | ↹2548365.7000 | ↹39074315.0000 | 939875.0500 | 67368.7160 |
| 5 | 17:10:03 | 505829.6200 | 51214.3930 | 174850.3100 | 115221.0800 | ↹2270876.1000 | ↹2516488.8000 | ↹38847517.0000 | 937448.1600 | 66078.4470 |
| x | | 501149.5500 | 52047.5440 | 176451.1000 | 116667.0300 | ↹2284182.2000 | ↹2544306.1000 | ↹39085147.0000 | 943001.3900 | 67261.8840 |
| %RSD | | 0.892 | 1.011 | 0.705 | 0.776 | ↹0.766 | ↹0.639 | ↹0.481 | 0.637 | 1.089 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 20903.6850 | 50155.4810 | 24129.8850 | 29780.6180 | 2096.9305 | 1187.5846 | 215.8361 | 145.0013 | 816120.0900 |
| 2 | 17:08:02 | 21457.5900 | 51282.3080 | 24633.8560 | 29983.8450 | 2178.6181 | 1190.0850 | 210.0027 | 161.6682 | 818021.1200 |
| 3 | 17:08:42 | 21081.6320 | 51684.7840 | 24139.9140 | 30443.0050 | 2286.1469 | 1203.4202 | 204.1692 | 158.3348 | 819044.7100 |
| 4 | 17:09:23 | 21409.9680 | 51823.1390 | 24450.8180 | 30036.5340 | 2121.1032 | 1214.2551 | 215.8361 | 180.0019 | 816813.3200 |
| 5 | 17:10:03 | 21023.9870 | 50205.7830 | 24691.5260 | 29647.6450 | 2192.7885 | 1165.0814 | 207.5026 | 153.3347 | 814299.2300 |
| x | | 21175.3730 | 51030.2990 | 24409.2000 | 29978.3300 | 2175.1174 | 1192.0853 | 210.6693 | 159.6682 | 816859.6900 |
| %RSD | | 1.157 | 1.569 | 1.089 | 1.011 | 3.385 | 1.554 | 2.445 | 8.133 | 0.223 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 19788.4670 | 310.0058 | 3613.2832 | 207.5026 | 472.5134 | 849761.3300 | 305.0056 | 145.0013 | 193.7523 |
| 2 | 17:08:02 | 19457.6900 | 297.5053 | 3628.2897 | 205.0025 | 352.5075 | 847361.9800 | 306.2556 | 112.5008 | 188.7521 |
| 3 | 17:08:42 | 19212.1210 | 265.0042 | 3715.8283 | 180.0019 | 455.0124 | 853479.0000 | 328.7565 | 115.0008 | 203.7525 |
| 4 | 17:09:23 | 19555.4180 | 322.5062 | 3535.7499 | 242.5035 | 435.0114 | 846840.2300 | 311.2558 | 140.0012 | 223.7530 |
| 5 | 17:10:03 | 19021.6850 | 260.0041 | 3545.7542 | 195.0023 | 415.0103 | 857405.5400 | 300.0054 | 137.5011 | 206.2526 |
| x | | 19407.0760 | 291.0051 | 3607.7810 | 206.0026 | 426.0110 | 850969.6200 | 310.2558 | 130.0010 | 203.2525 |
| %RSD | | 1.538 | 9.462 | 2.016 | 11.209 | 10.890 | 0.523 | 3.574 | 11.618 | 6.647 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 126.2510 | 240.0035 | 748044.5700 | 345.0071 | 120.0009 | 63697.5160 | 113087.1500 | 1197845.0000 | 643.7749 |
| 2 | 17:08:02 | 112.5008 | 252.5038 | 755542.8600 | 332.5066 | 132.5011 | 65123.4740 | 112185.0800 | 1197396.9000 | 653.7756 |
| 3 | 17:08:42 | 117.5008 | 300.0054 | 757996.3700 | 305.0056 | 132.5011 | 65070.5630 | 113573.7000 | 1199094.5000 | 672.5271 |
| 4 | 17:09:23 | 110.0007 | 272.5045 | 748604.1200 | 340.0069 | 165.0016 | 64307.1710 | 112321.9100 | 1211072.9000 | 656.2758 |
| 5 | 17:10:03 | 123.7509 | 255.0039 | 755515.5400 | 302.5055 | 167.5017 | 64569.1850 | 112856.5600 | 1215394.5000 | 702.5296 |
| x | | 118.0008 | 264.0042 | 753140.6900 | 325.0064 | 143.5013 | 64553.5820 | 112804.8800 | 1204160.8000 | 665.7766 |
| %RSD | | 5.927 | 8.797 | 0.599 | 6.130 | 14.916 | 0.912 | 0.504 | 0.701 | 3.454 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:07:21 | 1572.6484 | 69347.3480 | 58159.7480 | 143260.9300 | 830240.4900 | 0.0000 |
| 2 | 17:08:02 | 1503.8857 | 71248.2830 | 57908.0040 | 144298.6000 | 839312.8100 | 0.0000 |
| 3 | 17:08:42 | 1512.6373 | 69518.7670 | 57925.6250 | 147766.0800 | 846347.4900 | 0.0000 |
| 4 | 17:09:23 | 1526.3898 | 69347.3480 | 57306.3660 | 143314.3300 | 838905.9900 | 2.5000 |
| 5 | 17:10:03 | 1505.1359 | 70030.5250 | 57761.9950 | 144041.7100 | 856283.4900 | 0.0000 |
| x | | 1524.1394 | 69898.4540 | 57812.3480 | 144536.3300 | 842218.0600 | 0.5000 |
| %RSD | | 1.874 | 1.151 | 0.548 | 1.288 | 1.154 | 223.607 |

MF9M33-5x 06/17/2015 17:11:04

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 224459.4200 | 520.8496 | 112200.2800 | ↹1429980.3000 | 174753.3100 | 182971.9100 | ↹43059777.0000 | ↹1712935.4000 | 68742.3660 |
| 2 | 17:12:24 | 227481.3900 | 527.5167 | 111939.3100 | ↹1456796.8000 | 174390.8300 | 185016.3100 | ↹43016390.0000 | ↹1737899.5000 | 69357.4310 |
| 3 | 17:13:04 | 228457.5600 | 521.6830 | 113581.3000 | ↹1470667.5000 | 175105.5900 | 186166.5100 | ↹43210492.0000 | ↹1751811.6000 | 68858.3180 |
| 4 | 17:13:45 | 228955.9600 | 527.5167 | 112537.2800 | 1412837.3000 | 173528.1000 | 184065.6000 | ↹42880291.0000 | ↹1741763.3000 | 67230.1040 |
| 5 | 17:14:25 | 228520.9300 | 482.5140 | 110892.9600 | ↹1414355.0000 | 170583.2300 | 179461.8100 | ↹42162024.0000 | ↹1702736.6000 | 66849.5610 |
| x | | 227575.0500 | 516.0160 | 112230.2300 | ↹1436927.4000 | 173672.2100 | 183536.4300 | ↹42865795.0000 | ↹1729429.3000 | 68207.5560 |
| %RSD | | 0.801 | 3.680 | 0.868 | ↹1.798 | 1.050 | 1.397 | ↹0.958 | ↹1.195 | 1.611 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 490955.9300 | 36145.7210 | 102453.4500 | 69972.5410 | 1233930.2000 | 832596.5700 | ↹21902415.0000 | 520481.8600 | 27828.8890 |
| 2 | 17:12:24 | 497706.7500 | 36627.8190 | 104587.2200 | 69755.7350 | 1245548.3000 | 833952.6400 | ↹21829969.0000 | 525276.6200 | 27635.7480 |
| 3 | 17:13:04 | 499539.1600 | 35909.7040 | 105407.4500 | 70391.0440 | 1257979.4000 | 835857.5500 | ↹22083613.0000 | 523691.3600 | 27372.3810 |
| 4 | 17:13:45 | 498254.3100 | 35492.9240 | 103992.3400 | 69092.7460 | 1252056.4000 | 831309.6000 | ↹21919526.0000 | 520657.3200 | 27482.7430 |
| 5 | 17:14:25 | 500647.8200 | 35889.6180 | 102835.6200 | 69420.4530 | 1237423.3000 | 821119.7800 | ↹21579820.0000 | 514765.1500 | 27512.8430 |
| x | | 497420.8000 | 36013.1570 | 103855.2200 | 69726.5040 | 1245387.5000 | 830967.2300 | ↹21863069.0000 | 520974.4600 | 27566.5210 |
| %RSD | | 0.762 | 1.155 | 1.176 | 0.716 | 0.801 | 0.693 | ↹0.839 | 0.773 | 0.632 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 13122.8240 | 24465.8620 | 11926.0280 | 15374.1690 | 1451.7931 | 1024.2296 | 180.8353 | 140.0012 | 781807.6800 |
| 2 | 17:12:24 | 13235.5020 | 24621.3190 | 11780.8210 | 15629.6430 | 1525.1396 | 1063.4012 | 173.3351 | 161.6682 | 795137.2100 |
| 3 | 17:13:04 | 13195.4390 | 24734.1520 | 12193.9150 | 16165.6650 | 1509.3033 | 1054.2333 | 172.5018 | 148.3347 | 793660.9400 |
| 4 | 17:13:45 | 13293.0940 | 25137.8580 | 11798.3460 | 15354.1320 | 1511.8038 | 1078.4031 | 151.6681 | 146.6680 | 799872.2900 |
| 5 | 17:14:25 | 13243.0140 | 24245.2190 | 11943.5530 | 15188.8290 | 1435.1236 | 1041.7318 | 157.5015 | 140.0012 | 799718.5300 |
| x | | 13217.9750 | 24640.8820 | 11928.5330 | 15542.4880 | 1486.6327 | 1052.3998 | 167.1684 | 147.3346 | 794039.3300 |
| %RSD | | 0.481 | 1.351 | 1.387 | 2.460 | 2.711 | 1.963 | 7.246 | 6.018 | 0.928 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 11688.1910 | 340.0069 | 2197.7898 | 172.5018 | 530.0169 | 856725.6600 | 162.5016 | 77.5004 | 123.7509 |
| 2 | 17:12:24 | 11553.0030 | 265.0042 | 2250.3038 | 202.5025 | 480.0138 | 865205.8000 | 166.2517 | 65.0003 | 95.0005 |
| 3 | 17:13:04 | 11397.7890 | 350.0074 | 2280.3119 | 210.0027 | 495.0147 | 865883.5600 | 177.5019 | 65.0003 | 100.0006 |
| 4 | 17:13:45 | 11853.4240 | 325.0063 | 2382.8406 | 175.0018 | 485.0141 | 865009.3900 | 193.7523 | 87.5005 | 103.7507 |
| 5 | 17:14:25 | 11440.3480 | 215.0028 | 2337.8279 | 202.5025 | 447.5120 | 872539.5500 | 130.0010 | 97.5006 | 98.7506 |
| x | | 11586.5510 | 299.0055 | 2289.8148 | 192.5022 | 487.5143 | 865072.7900 | 166.0017 | 78.5004 | 104.2507 |
| %RSD | | 1.613 | 19.191 | 3.170 | 9.045 | 6.090 | 0.649 | 14.162 | 18.100 | 10.878 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 60.0002 | 125.0009 | 762555.4800 | 335.0067 | 132.5011 | 29928.6470 | 53053.3440 | 1211820.9000 | 385.0089 |
| 2 | 17:12:24 | 50.0001 | 112.5008 | 755846.1000 | 345.0071 | 125.0009 | 29549.7990 | 53123.7900 | 1207984.1000 | 383.7588 |
| 3 | 17:13:04 | 51.2502 | 127.5010 | 760620.0300 | 460.0127 | 115.0008 | 30299.9850 | 54339.0880 | 1223761.7000 | 387.5090 |
| 4 | 17:13:45 | 46.2501 | 122.5009 | 767732.4800 | 357.5077 | 75.0003 | 30131.8770 | 52489.7920 | 1238597.5000 | 411.2602 |
| 5 | 17:14:25 | 52.5002 | 132.5011 | 773120.5900 | 347.5073 | 92.5005 | 29778.1090 | 52140.1070 | 1242727.5000 | 376.2585 |
| x | | 52.0002 | 124.0009 | 763974.9400 | 369.0083 | 108.0007 | 29937.6840 | 53029.2240 | 1224978.3000 | 388.7591 |
| %RSD | | 9.705 | 5.981 | 0.871 | 13.956 | 22.046 | 0.981 | 1.580 | 1.267 | 3.411 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:11:44 | 932.5522 | 26642.5210 | 21856.1240 | 55682.9160 | 854606.2200 | 0.0000 |
| 2 | 17:12:24 | 952.5544 | 27083.9410 | 22136.8630 | 56470.6900 | 861819.1200 | 0.0000 |
| 3 | 17:13:04 | 928.8018 | 28037.0850 | 22713.4120 | 56586.4720 | 868676.8000 | 0.0000 |
| 4 | 17:13:45 | 897.5483 | 27126.5790 | 21948.8670 | 56334.7750 | 865485.2000 | 0.0000 |
| 5 | 17:14:25 | 930.0519 | 26466.9630 | 21838.5780 | 54668.7340 | 877345.8000 | 2.5000 |
| x | | 928.3017 | 27071.4180 | 22098.7690 | 55948.7170 | 865586.6300 | 0.5000 |
| %RSD | | 2.124 | 2.251 | 1.645 | 1.424 | 0.971 | 223.607 |

MF9M34-5x 06/17/2015 17:15:26

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 226571.2600 | 248.3370 | 56402.7320 | 652719.1600 | 80411.0940 | 86057.0670 | T19166449.0000 | 914442.7300 | 55994.9960 |
| 2 | 17:16:47 | 229702.7600 | 250.0038 | 57477.5390 | 671226.1200 | 81668.2310 | 87325.1560 | T19404001.0000 | 945707.9000 | 57278.6770 |
| 3 | 17:17:27 | 228244.3300 | 263.3375 | 57399.5040 | 681117.3700 | 83915.3910 | 88148.7590 | T19558776.0000 | 938979.5300 | 57407.0550 |
| 4 | 17:18:08 | 228872.0400 | 251.6705 | 57331.5380 | 666044.0800 | 83334.6060 | 88401.4150 | T19182406.0000 | 944013.4600 | 57386.9170 |
| 5 | 17:18:48 | 230379.4000 | 251.6705 | 56591.5060 | 657714.9500 | 82693.2650 | 86127.7920 | T19221311.0000 | 929837.0900 | 56420.3510 |
| x | | 228753.9600 | 253.0038 | 57040.5640 | 665764.3300 | 82404.5170 | 87212.0380 | T19306589.0000 | 934596.1400 | 56897.5990 |
| %RSD | | 0.640 | 2.348 | 0.882 | 1.680 | 1.689 | 1.258 | T0.880 | 1.375 | 1.141 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 484958.3400 | 14722.9950 | 48452.9530 | 35053.5700 | 547882.2900 | 1614761.0000 | T9989365.5000 | 234082.1300 | 24195.0730 |
| 2 | 17:16:47 | 493532.9200 | 15191.3340 | 48691.8390 | 35123.8650 | 559798.9800 | 1642792.4000 | T10089486.0000 | 233305.8100 | 24210.1170 |
| 3 | 17:17:27 | 497803.5400 | 15103.6750 | 48478.0990 | 35349.8180 | 559077.9000 | 1650259.8000 | T10073398.0000 | 237036.4000 | 24363.0620 |
| 4 | 17:18:08 | 497721.3400 | 14407.4440 | 48100.9220 | 34920.5140 | 555670.9700 | 1634869.9000 | T9938117.5000 | 232293.1000 | 24355.5400 |
| 5 | 17:18:48 | 494308.1500 | 14379.8960 | 47763.9930 | 34606.7090 | 549199.9200 | T1657919.3000 | T9901646.0000 | 233352.0800 | 23979.4510 |
| x | | 493664.8600 | 14761.0690 | 48297.5610 | 35010.8950 | 554326.0100 | T1640120.5000 | T9998402.6000 | 234013.9000 | 24220.6480 |
| %RSD | | 1.061 | 2.567 | 0.758 | 0.784 | 0.997 | T1.010 | T0.822 | 0.772 | 0.644 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 5536.8388 | 47967.6580 | 22971.6180 | 46640.1540 | 1010.0612 | 1054.2333 | 173.3351 | 129.1677 | 768192.0800 |
| 2 | 17:16:47 | 5761.9913 | 49026.2920 | 23397.8010 | 46240.4360 | 1045.8990 | 1010.0612 | 169.1684 | 137.5011 | 768569.6300 |
| 3 | 17:17:27 | 5626.8991 | 48825.1160 | 23019.2490 | 46567.2480 | 990.0588 | 1012.5615 | 157.5015 | 122.5009 | 775077.9900 |
| 4 | 17:18:08 | 5894.5840 | 49021.2620 | 23134.5680 | 46735.6870 | 998.3931 | 1039.2315 | 160.0015 | 146.6680 | 778145.0100 |
| 5 | 17:18:48 | 5609.3873 | 48113.4950 | 22500.3350 | 46534.5660 | 954.2213 | 1000.8934 | 155.8348 | 138.3345 | 775362.7400 |
| x | | 5685.9401 | 48590.7640 | 23004.7140 | 46543.6180 | 999.7267 | 1023.3962 | 163.1683 | 134.8344 | 773069.4900 |
| %RSD | | 2.501 | 1.052 | 1.420 | 0.400 | 3.319 | 2.187 | 4.700 | 6.874 | 0.575 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 5496.8123 | 787.5372 | 1655.1644 | 522.5164 | 1235.0915 | 857444.2300 | 118.7509 | 45.0001 | 130.0010 |
| 2 | 17:16:47 | 5579.3671 | 860.0444 | 1652.6639 | 515.0159 | 1325.1053 | 858494.5600 | 163.7516 | 47.5001 | 113.7508 |
| 3 | 17:17:27 | 5206.6260 | 797.5382 | 1635.1604 | 435.0114 | 1320.1046 | 864840.6500 | 135.0011 | 57.5002 | 131.2510 |
| 4 | 17:18:08 | 5574.3638 | 822.5406 | 1672.6679 | 540.0175 | 1302.6018 | 868877.4400 | 136.2511 | 42.5001 | 122.5009 |
| 5 | 17:18:48 | 5319.1971 | 747.5335 | 1765.1869 | 445.0119 | 1157.5804 | 872041.2200 | 146.2513 | 40.0001 | 91.2505 |
| x | | 5435.2733 | 803.0388 | 1676.1687 | 491.5146 | 1268.0967 | 864339.6200 | 140.0012 | 46.5001 | 117.7508 |
| %RSD | | 3.046 | 5.202 | 3.073 | 9.768 | 5.638 | 0.736 | 11.811 | 14.526 | 13.910 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 196.2523 | 405.0098 | 754671.4600 | 137.5011 | 145.0013 | 19833.5740 | 34664.4480 | 1215912.6000 | 253.7539 |
| 2 | 17:16:47 | 156.2515 | 447.5120 | 760510.6900 | 230.0032 | 117.5008 | 19715.7950 | 34877.8350 | 1209597.4000 | 237.5034 |
| 3 | 17:17:27 | 193.7523 | 425.0108 | 758488.2400 | 230.0032 | 125.0009 | 20059.1130 | 34538.9280 | 1207777.1000 | 230.0032 |
| 4 | 17:18:08 | 173.7518 | 345.0071 | 762082.5200 | 230.0032 | 150.0014 | 20079.1610 | 34451.0660 | 1220415.0000 | 213.7527 |
| 5 | 17:18:48 | 141.2512 | 347.5073 | 762049.7100 | 192.5022 | 105.0007 | 19660.6650 | 34026.8280 | 1218160.6000 | 240.0035 |
| x | | 172.2518 | 394.0094 | 759560.5200 | 204.0026 | 128.5010 | 19869.6620 | 34511.8210 | 1214372.5000 | 235.0033 |
| %RSD | | 13.792 | 11.705 | 0.409 | 19.886 | 14.663 | 0.970 | 0.913 | 0.450 | 6.237 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:16:07 | 525.0165 | 57852.6210 | 46982.0670 | 116645.7000 | 859629.3300 | 5.0000 |
| 2 | 17:16:47 | 542.5177 | 56843.2100 | 46926.7560 | 116564.5800 | 868711.4000 | 2.5000 |
| 3 | 17:17:27 | 540.0175 | 57049.6130 | 47492.4470 | 116764.8500 | 857491.2200 | 2.5000 |
| 4 | 17:18:08 | 498.7649 | 58378.7710 | 46969.4960 | 116823.1600 | 871898.6400 | 2.5000 |
| 5 | 17:18:48 | 551.2682 | 56667.0160 | 46300.7690 | 115020.8500 | 865115.8900 | 0.0000 |
| x | | 531.5170 | 57358.2460 | 46934.3070 | 116363.8300 | 864569.3000 | 2.5000 |
| %RSD | | 3.877 | 1.270 | 0.902 | 0.651 | 0.698 | 70.711 |

**MF9M35-5x** 06/17/2015 17:19:49

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 228026.8300 | 278.3380 | 59398.4390 | 797848.9300 | 98797.2020 | 104794.8000 | T22452074.0000 | 1057992.0000 | 60380.4580 |
| 2 | 17:21:10 | 229565.7300 | 285.0049 | 60176.4910 | 813438.4400 | 100806.0500 | 105280.8700 | T22616845.0000 | 1066755.8000 | 61292.0770 |
| 3 | 17:21:50 | 228674.2100 | 290.0051 | 60020.3710 | 816634.5100 | 99890.1150 | 108177.6200 | T22554794.0000 | 1073823.0000 | 61417.9990 |
| 4 | 17:22:30 | 228730.7300 | 290.8384 | 59340.5280 | 815457.1600 | 100431.5600 | 106486.0400 | T22381840.0000 | T1062640.7000 | 61153.5650 |
| 5 | 17:23:11 | 229352.4800 | 274.1712 | 59189.4600 | 803434.2200 | 100036.8600 | 105680.8800 | T22303881.0000 | 1053339.2000 | 60007.7810 |
| x | | 228870.0000 | 283.6715 | 59625.0580 | 809362.6500 | 99992.3580 | 106084.0400 | T22461887.0000 | T1062910.1000 | 60850.3760 |
| %RSD | | 0.266 | 2.566 | 0.742 | 1.023 | 0.758 | 1.248 | T0.564 | T0.743 | 1.020 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 488296.2900 | 14625.3230 | 54049.7160 | 39081.4270 | 594355.6900 | 1826612.6000 | T10732841.0000 | 254304.4300 | 30686.3950 |
| 2 | 17:21:10 | 496981.5900 | 14527.6520 | 54439.7420 | 39385.3530 | 605512.5100 | T1873077.8000 | T10914826.0000 | 257492.6200 | 30977.4690 |
| 3 | 17:21:50 | 492083.3500 | 14960.9180 | 53672.2880 | 39204.5030 | 606919.5400 | T1882327.0000 | T10896542.0000 | 255141.9500 | 30448.0230 |
| 4 | 17:22:30 | 492197.2900 | 15246.4340 | 53777.9660 | 38996.0280 | 600683.6300 | 1824384.4000 | T10832106.0000 | 253840.6000 | 30708.9780 |
| 5 | 17:23:11 | 495222.6200 | 14620.3140 | 53689.9010 | 38722.2560 | 598115.9500 | T1850547.8000 | T10804569.0000 | 250828.9400 | 30450.5330 |
| x | | 492956.2300 | 14796.1280 | 53925.9230 | 39077.9140 | 601117.4600 | T1851389.9000 | T10836177.0000 | 254321.7100 | 30654.2800 |
| %RSD | | 0.676 | 2.033 | 0.602 | 0.632 | 0.864 | T1.422 | T0.677 | 0.946 | 0.716 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 6570.0889 | 48540.9630 | 23101.9780 | 54570.5940 | 1110.0739 | 1036.7312 | 140.0012 | 145.0013 | 761910.2800 |
| 2 | 17:21:10 | 6560.0811 | 48835.1740 | 23751.2990 | 53780.4820 | 1230.0908 | 1080.9034 | 163.3349 | 145.8346 | 769874.7400 |
| 3 | 17:21:50 | 6620.1285 | 49403.5100 | 23969.4220 | 54391.9320 | 1184.2508 | 1030.8971 | 160.0015 | 137.5011 | 769921.2600 |
| 4 | 17:22:30 | 6497.5321 | 49843.6190 | 24292.8570 | 54105.0730 | 1207.5875 | 1033.3974 | 152.5014 | 163.3349 | 766444.1000 |
| 5 | 17:23:11 | 6572.5909 | 48631.4880 | 22916.4670 | 54477.4880 | 1097.5723 | 1002.5603 | 150.8347 | 139.1678 | 764340.9700 |
| x | | 6564.0843 | 49050.9510 | 23606.4050 | 54265.1140 | 1165.9151 | 1036.8979 | 153.3348 | 146.1680 | 766498.2700 |
| %RSD | | 0.668 | 1.133 | 2.465 | 0.594 | 5.071 | 2.712 | 5.916 | 7.013 | 0.456 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 5686.9398 | 757.5344 | 1770.1880 | 495.0147 | 1162.5811 | 860382.7000 | 138.7512 | 47.5001 | 107.5007 |
| 2 | 17:21:10 | 5759.4896 | 705.0298 | 1635.1604 | 515.0159 | 1165.0814 | 861991.9500 | 135.0011 | 35.0001 | 125.0009 |
| 3 | 17:21:50 | 5897.0858 | 845.0428 | 1737.6812 | 452.5123 | 1280.0983 | 868174.5400 | 166.2517 | 42.5001 | 122.5009 |
| 4 | 17:22:30 | 5696.9466 | 802.5386 | 1802.6950 | 502.5152 | 1280.0983 | 854542.6700 | 146.2513 | 47.5001 | 130.0010 |
| 5 | 17:23:11 | 5419.2615 | 845.0428 | 1667.6669 | 497.5149 | 1187.5846 | 858486.2700 | 111.2507 | 40.0001 | 103.7507 |
| x | | 5691.9447 | 791.0377 | 1722.6783 | 492.5146 | 1215.0888 | 860715.6200 | 139.5012 | 42.5001 | 117.7508 |
| %RSD | | 3.056 | 7.607 | 4.060 | 4.802 | 4.949 | 0.582 | 14.247 | 12.478 | 9.741 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 140.0012 | 452.5123 | 762771.4700 | 110.0007 | 105.0007 | 20532.7650 | 35959.9200 | 1193353.9000 | 221.2529 |
| 2 | 17:21:10 | 178.7519 | 412.5102 | 758108.4000 | 200.0024 | 125.0009 | 20896.1660 | 36690.5950 | 1216007.5000 | 231.2532 |
| 3 | 17:21:50 | 157.5015 | 435.0114 | 758829.8400 | 190.0022 | 147.5013 | 21274.6220 | 36723.2380 | 1207248.0000 | 262.5041 |
| 4 | 17:22:30 | 181.2520 | 420.0106 | 755799.6600 | 177.5019 | 112.5008 | 20753.3100 | 36293.8630 | 1204784.2000 | 232.5032 |
| 5 | 17:23:11 | 182.5020 | 440.0116 | 764075.7200 | 187.5021 | 107.5007 | 20675.6170 | 35942.3440 | 1211254.2000 | 200.0024 |
| x | | 168.0017 | 432.0112 | 759917.0200 | 173.0019 | 119.5009 | 20826.4960 | 36321.9920 | 1206529.6000 | 229.5032 |
| %RSD | | 11.119 | 3.692 | 0.450 | 20.877 | 14.600 | 1.358 | 1.042 | 0.705 | 9.839 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:20:29 | 586.2706 | 64004.8570 | 53939.0020 | 131024.5100 | 859339.0600 | 0.0000 |
| 2 | 17:21:10 | 632.5240 | 64561.6270 | 53483.5810 | 132621.9800 | 858884.3200 | 2.5000 |
| 3 | 17:21:50 | 607.5221 | 64536.4330 | 53307.4580 | 132444.1900 | 857898.9000 | 0.0000 |
| 4 | 17:22:30 | 602.5218 | 65367.8760 | 52935.0950 | 133008.0600 | 876884.5900 | 2.5000 |
| 5 | 17:23:11 | 580.0202 | 63148.3600 | 51868.4190 | 129803.1200 | 859142.7800 | 2.5000 |
| x | | 601.7718 | 64323.8310 | 53106.7110 | 131780.3700 | 862429.9300 | 1.5000 |
| %RSD | | 3.418 | 1.271 | 1.470 | 1.014 | 0.939 | 91.287 |

MF9M37-5x 06/17/2015 17:24:12

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 225523.4100 | 235.0033 | 82200.9300 | 695576.6100 | 86567.3110 | 92864.5630 | T18962215.0000 | 942735.1800 | 111516.1900 |
| 2 | 17:25:32 | 228652.8100 | 238.3367 | 84006.3000 | 720349.2900 | 88229.6080 | 95165.3010 | T19303603.0000 | 958936.8200 | 113925.9600 |
| 3 | 17:26:13 | 228519.2200 | 228.3365 | 83248.7550 | 731854.8900 | 89760.8310 | 94639.3620 | T19316158.0000 | 971163.6300 | 113751.1000 |
| 4 | 17:26:54 | 227849.5800 | 220.0029 | 84107.3110 | 724877.8400 | 89144.2650 | 93749.3870 | T19146593.0000 | 970794.0600 | 113350.7000 |
| 5 | 17:27:36 | 227223.6700 | 200.8358 | 82208.5040 | 712082.0600 | 88345.8300 | 95296.7910 | T19027023.0000 | 951212.1800 | 114075.4900 |
| x | | 227553.7400 | 224.5030 | 83154.3600 | 716948.1400 | 88409.5690 | 94343.0810 | T19151118.0000 | 958968.3700 | 113323.8900 |
| %RSD | | 0.558 | 6.669 | 1.116 | 1.944 | 1.362 | 1.088 | T0.832 | 1.290 | 0.923 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 479811.6200 | 18062.0530 | 46599.9300 | 34815.0740 | 535172.4400 | T1909572.3000 | T9730736.5000 | 228931.9800 | 17936.7830 |
| 2 | 17:25:32 | 487368.0000 | 18530.5800 | 47429.5910 | 34644.3650 | 548106.3200 | T1956557.6000 | T9874647.9000 | 235311.0200 | 18487.9860 |
| 3 | 17:26:13 | 488804.8500 | 18410.3140 | 47492.4470 | 35377.4350 | 553057.9500 | T1965513.8000 | T9932124.1000 | 236635.2400 | 19184.5570 |
| 4 | 17:26:54 | 489100.1900 | 18132.2050 | 46107.2010 | 34902.9400 | 538600.5700 | T1935338.9000 | T9779995.9000 | 230763.9900 | 18224.9070 |
| 5 | 17:27:36 | 489252.5000 | 17924.2560 | 46313.3390 | 34230.1580 | 538232.9200 | T1921179.2000 | T9802202.0000 | 230563.5500 | 17946.8040 |
| x | | 486867.4300 | 18211.8820 | 46788.5020 | 34793.9940 | 542634.0400 | T1937632.4000 | T9823941.3000 | 232441.1600 | 18356.2080 |
| %RSD | | 0.825 | 1.379 | 1.365 | 1.196 | 1.397 | T1.210 | T0.811 | 1.435 | 2.810 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 5844.5488 | 48724.5300 | 23798.9350 | 66292.6380 | 1270.0968 | 1044.2321 | 152.5014 | 150.0014 | 755723.1600 |
| 2 | 17:25:32 | 5674.4313 | 49018.7470 | 23618.4220 | 67250.2650 | 1333.4400 | 1045.8990 | 154.1681 | 154.1681 | 764537.8600 |
| 3 | 17:26:13 | 6012.1680 | 49823.4990 | 23661.0430 | 68021.4870 | 1305.9357 | 1016.7287 | 175.8352 | 151.6681 | 767748.9000 |
| 4 | 17:26:54 | 5882.0752 | 49345.6680 | 23721.2140 | 67260.3460 | 1284.2656 | 1011.7281 | 150.0014 | 138.3345 | 767743.4300 |
| 5 | 17:27:36 | 5854.5558 | 48219.1020 | 23106.9920 | 67409.0400 | 1239.2588 | 1022.5627 | 141.6679 | 162.5016 | 767694.1900 |
| x | | 5853.5558 | 49026.3090 | 23581.3210 | 67246.7550 | 1286.5994 | 1028.2301 | 154.8348 | 151.3347 | 764689.5100 |
| %RSD | | 2.060 | 1.241 | 1.161 | 0.922 | 2.772 | 1.542 | 8.193 | 5.757 | 0.680 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 4045.9820 | 292.5051 | 945.0536 | 165.0016 | 455.0124 | 852108.8600 | 121.2509 | 45.0001 | 85.0004 |
| 2 | 17:25:32 | 4133.5249 | 287.5050 | 982.5579 | 182.5020 | 397.5095 | 859672.1800 | 130.0010 | 37.5001 | 86.2504 |
| 3 | 17:26:13 | 4201.0587 | 312.5059 | 975.0570 | 132.5011 | 420.0106 | 861154.1000 | 116.2508 | 37.5001 | 108.7507 |
| 4 | 17:26:54 | 3823.3769 | 227.5031 | 980.0576 | 192.5022 | 405.0098 | 855987.8000 | 126.2510 | 40.0001 | 103.7507 |
| 5 | 17:27:36 | 4161.0386 | 282.5048 | 1027.5633 | 195.0023 | 455.0124 | 864104.8800 | 130.0010 | 57.5002 | 92.5005 |
| x | | 4072.9962 | 280.5048 | 982.0579 | 173.5018 | 426.5110 | 858605.5700 | 124.7509 | 43.5001 | 95.2505 |
| %RSD | | 3.700 | 11.316 | 3.009 | 14.856 | 6.389 | 0.543 | 4.774 | 19.319 | 11.112 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 260.0041 | 590.0209 | 748227.4400 | 280.0047 | 112.5008 | 27638.2570 | 48286.9940 | 1196032.8000 | 187.5021 |
| 2 | 17:25:32 | 273.7545 | 560.0188 | 756712.1500 | 307.5057 | 127.5010 | 28009.4930 | 49348.1830 | 1223257.6000 | 228.7531 |
| 3 | 17:26:13 | 277.5046 | 617.5229 | 761470.1500 | 282.5048 | 130.0010 | 27803.8060 | 48699.3830 | 1204324.3000 | 236.2534 |
| 4 | 17:26:54 | 257.5040 | 560.0188 | 762468.0000 | 205.0025 | 95.0005 | 27389.9390 | 48508.2730 | 1219018.6000 | 222.5030 |
| 5 | 17:27:36 | 263.7542 | 562.5190 | 762268.4200 | 227.5031 | 107.5007 | 27864.0060 | 49229.9870 | 1230098.3000 | 201.2524 |
| x | | 266.5043 | 578.0201 | 758229.2300 | 260.5042 | 114.5008 | 27741.1000 | 48814.5640 | 1214546.3000 | 215.2528 |
| %RSD | | 3.273 | 4.405 | 0.800 | 16.335 | 12.675 | 0.855 | 0.940 | 1.153 | 9.412 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:24:52 | 548.7681 | 51128.8700 | 43272.0570 | 107987.6800 | 854596.5500 | 2.5000 |
| 2 | 17:25:32 | 541.2676 | 53209.3330 | 43347.4480 | 109920.2000 | 858048.1500 | 2.5000 |
| 3 | 17:26:13 | 533.7671 | 53765.3850 | 45013.7470 | 109722.6200 | 860443.5200 | 0.0000 |
| 4 | 17:26:54 | 537.5173 | 52950.1910 | 45099.2070 | 110188.7100 | 873548.7700 | 0.0000 |
| 5 | 17:27:36 | 506.2654 | 52436.9610 | 43251.9530 | 106572.1300 | 871019.7200 | 5.0000 |
| x | | 533.5171 | 52698.1480 | 43996.8820 | 108878.2700 | 863531.3400 | 2.0000 |
| %RSD | | 3.039 | 1.896 | 2.201 | 1.425 | 0.962 | 104.583 |

MF9M38-5x 06/17/2015 17:28:38

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 226486.5000 | 203.3358 | 82526.6250 | 700016.2600 | 88259.9270 | 93132.5280 | τ20447489.0000 | 877333.3300 | 80130.9140 |
| 2 | 17:29:58 | 228135.5800 | 219.1696 | 82920.5060 | 717063.2100 | 89937.7230 | 96247.6250 | τ20702711.0000 | 900511.1000 | 81675.8040 |
| 3 | 17:30:39 | 227517.3600 | 227.5031 | 84102.2610 | 725950.4500 | 90387.5500 | 96455.0020 | τ20895733.0000 | 913216.0100 | 82415.5340 |
| 4 | 17:31:19 | 226203.9800 | 211.6694 | 83809.3320 | 727181.1200 | 91580.4690 | 95590.1220 | τ20608659.0000 | 904283.6900 | 82632.6680 |
| 5 | 17:31:59 | 226483.9400 | 228.3365 | 83693.1730 | 725514.8500 | 89523.2960 | 95210.8160 | τ20487984.0000 | 890265.5000 | 80875.5560 |
| X | | 226965.4700 | 218.0029 | 83410.3790 | 719145.1800 | 89937.7930 | 95327.2190 | τ20628515.0000 | 897121.9300 | 81546.0950 |
| %RSD | | 0.363 | 4.885 | 0.790 | 1.588 | 1.349 | 1.390 | τ0.873 | 1.537 | 1.287 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 481757.9800 | 14843.2070 | 47826.8520 | 31717.7460 | 508109.7500 | 1015458.8000 | τ9139706.8000 | 216788.6300 | 22658.2620 |
| 2 | 17:29:58 | 488028.7800 | 15654.6900 | 49446.2620 | 32267.3500 | 517231.0200 | 1050160.5000 | τ9282389.2000 | 220606.9000 | 23157.1310 |
| 3 | 17:30:39 | 488659.1600 | 15674.7280 | 49531.7680 | 32686.4790 | 520955.1000 | 1050013.6000 | τ9491399.7000 | 220691.6000 | 23728.7350 |
| 4 | 17:31:19 | 490914.8700 | 15171.2980 | 49770.6850 | 32415.4230 | 524167.4400 | 1055987.5000 | τ9391582.9000 | 220853.3000 | 23919.2790 |
| 5 | 17:31:59 | 492781.6000 | 15098.6660 | 48457.9820 | 32101.7120 | 514884.7000 | 1036292.3000 | τ9354227.5000 | 220219.3500 | 23262.4230 |
| X | | 488428.4800 | 15288.5180 | 49006.7100 | 32237.7420 | 517069.6000 | 1041582.5000 | τ9331861.2000 | 219831.9500 | 23345.1660 |
| %RSD | | 0.856 | 2.384 | 1.691 | 1.121 | 1.187 | 1.565 | τ1.406 | 0.781 | 2.132 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 5414.2583 | 66693.3160 | 31511.9680 | 44131.5470 | 1145.9121 | 1044.2321 | 149.1680 | 137.5011 | 757660.2700 |
| 2 | 17:29:58 | 5519.3272 | 67068.8120 | 32463.1080 | 45785.4340 | 1207.5875 | 1054.2333 | 156.6681 | 156.6681 | 766296.4000 |
| 3 | 17:30:39 | 5749.4827 | 68810.4240 | 32503.2640 | 45498.8710 | 1225.0900 | 1018.3956 | 135.0011 | 142.5012 | 761546.7000 |
| 4 | 17:31:19 | 5471.7958 | 67988.7210 | 32455.5790 | 46283.1720 | 1160.9142 | 1018.3956 | 125.8343 | 140.8345 | 760666.5000 |
| 5 | 17:31:59 | 5596.8789 | 67915.6290 | 32739.1850 | 45091.6660 | 1207.5875 | 1023.3962 | 143.3346 | 141.6679 | 755392.6200 |
| X | | 5550.3486 | 67695.3800 | 32334.6210 | 45358.1380 | 1189.4183 | 1031.7305 | 142.0012 | 143.8346 | 760312.4900 |
| %RSD | | 2.340 | 1.230 | 1.467 | 1.789 | 2.863 | 1.598 | 8.470 | 5.159 | 0.545 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 4393.6579 | 240.0035 | 1095.0719 | 162.5016 | 400.0096 | 850070.6200 | 112.5008 | 57.5002 | 73.7503 |
| 2 | 17:29:58 | 4758.8584 | 275.0045 | 1035.0643 | 155.0014 | 455.0124 | 849225.6300 | 111.2507 | 65.0003 | 81.2504 |
| 3 | 17:30:39 | 4568.7521 | 277.5046 | 982.5579 | 177.5019 | 390.0091 | 854332.6900 | 88.7505 | 45.0001 | 97.5006 |
| 4 | 17:31:19 | 4616.2782 | 270.0044 | 885.0470 | 192.5022 | 412.5102 | 853711.0700 | 135.0011 | 55.0002 | 95.0005 |
| 5 | 17:31:59 | 4638.7907 | 252.5038 | 970.0565 | 142.5012 | 377.5086 | 867446.7800 | 103.7507 | 60.0002 | 96.2506 |
| X | | 4595.2675 | 263.0042 | 993.5595 | 166.0017 | 407.0100 | 854957.3600 | 110.2507 | 56.5002 | 88.7505 |
| %RSD | | 2.888 | 6.138 | 7.873 | 11.743 | 7.312 | 0.857 | 15.199 | 13.126 | 11.993 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 140.0012 | 327.5064 | 744466.9900 | 277.5046 | 115.0008 | 16831.9820 | 29973.8090 | 1198548.7000 | 271.2544 |
| 2 | 17:29:58 | 146.2513 | 387.5090 | 752472.8600 | 297.5053 | 105.0007 | 17578.5210 | 30726.5430 | 1213783.0000 | 223.7530 |
| 3 | 17:30:39 | 132.5011 | 352.5075 | 750209.2900 | 265.0042 | 132.5011 | 18229.9180 | 30751.6350 | 1204959.5000 | 273.7545 |
| 4 | 17:31:19 | 136.2511 | 282.5048 | 744065.9400 | 305.0056 | 115.0008 | 17062.4500 | 30335.1130 | 1209715.3000 | 230.0032 |
| 5 | 17:31:59 | 128.7510 | 365.0080 | 752573.9000 | 272.5045 | 132.5011 | 17097.5220 | 29916.1020 | 1196388.9000 | 227.5031 |
| X | | 136.7511 | 343.0071 | 748757.8000 | 283.5048 | 120.0009 | 17360.0780 | 30340.6400 | 1204679.1000 | 245.2536 |
| %RSD | | 4.948 | 11.712 | 0.562 | 6.000 | 10.099 | 3.208 | 1.311 | 0.608 | 10.190 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:29:18 | 580.0202 | 53843.3860 | 43573.6230 | 109160.3100 | 851207.0600 | 0.0000 |
| 2 | 17:29:58 | 548.7681 | 54917.8640 | 45860.8470 | 112707.0500 | 868261.7100 | 2.5000 |
| 3 | 17:30:39 | 576.2699 | 55333.0970 | 45124.3420 | 113140.3700 | 863051.1100 | 0.0000 |
| 4 | 17:31:19 | 611.2724 | 55589.7970 | 45076.5850 | 110411.6300 | 857270.1100 | 0.0000 |
| 5 | 17:31:59 | 547.5180 | 54006.9400 | 44018.4510 | 110928.4300 | 864588.9300 | 2.5000 |
| X | | 572.7697 | 54738.2170 | 44730.7700 | 111269.5600 | 860875.7800 | 1.0000 |
| %RSD | | 4.587 | 1.429 | 2.060 | 1.481 | 0.778 | 136.931 |

**MF9M39-5x** 06/17/2015 17:33:00

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 226224.5300 | 212.5027 | 79227.3360 | 692788.0600 | 86188.4140 | 92546.0490 | ┬19937430.0000 | 835887.8700 | 55760.9350 |
| 2 | 17:34:21 | 228516.6500 | 216.6695 | 79913.8450 | 701959.9900 | 87795.0550 | 91408.5970 | ┬20263781.0000 | 855203.0400 | 55851.5390 |
| 3 | 17:35:02 | 227160.3100 | 250.8371 | 79613.4900 | 706326.8500 | 89371.6820 | 95059.0990 | ┬20510882.0000 | 862713.7100 | 57741.8570 |
| 4 | 17:35:42 | 227925.7900 | 235.8367 | 81441.0230 | 712968.2400 | 88047.6990 | 92788.7250 | ┬20332923.0000 | 858348.0600 | 57303.8490 |
| 5 | 17:36:22 | 226401.7500 | 199.1691 | 78672.1130 | 689474.4400 | 86466.2700 | 91398.4870 | ┬19990851.0000 | 841952.7400 | 56352.3930 |
| x | | 227245.8100 | 223.0030 | 79773.5620 | 700703.5200 | 87573.8240 | 92640.1910 | ┬20207174.0000 | 850821.0800 | 56602.1140 |
| %RSD | | 0.431 | 9.129 | 1.305 | 1.377 | 1.473 | 1.614 | ┬1.189 | 1.339 | 1.562 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 480508.8700 | 15982.8120 | 53070.9550 | 31609.8370 | 569451.1700 | 1001740.4000 | ┬10422798.0000 | 243511.6400 | 20876.1160 |
| 2 | 17:34:21 | 483581.6900 | 16386.0940 | 52026.9030 | 31634.9320 | 586309.6200 | 1018354.8000 | ┬10556201.0000 | 246621.1100 | 21242.0390 |
| 3 | 17:35:02 | 491346.7400 | 16536.3910 | 52213.0610 | 31491.8920 | 589948.4500 | 1027288.0000 | ┬10493380.0000 | 248119.6200 | 21294.6730 |
| 4 | 17:35:42 | 490045.8900 | 16270.8690 | 52610.5500 | 31777.9750 | 582016.2700 | 1031084.2000 | ┬10508805.0000 | 244901.4900 | 21234.5200 |
| 5 | 17:36:22 | 490072.3900 | 16240.8100 | 53123.7900 | 31062.7860 | 580366.9900 | 1019266.9000 | ┬10452765.0000 | 243205.3900 | 21084.1390 |
| x | | 487111.1200 | 16283.3950 | 52609.0520 | 31515.4850 | 581618.5000 | 1019546.9000 | ┬10486790.0000 | 245271.8500 | 21146.2970 |
| %RSD | | 0.981 | 1.254 | 0.938 | 0.865 | 1.335 | 1.109 | ┬0.491 | 0.851 | 0.805 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 4913.9484 | 67807.2520 | 32734.1660 | 21041.5310 | 1260.9287 | 992.5591 | 140.8345 | 141.6679 | 751872.1000 |
| 2 | 17:34:21 | 5089.0534 | 69115.4330 | 33512.2490 | 21615.4970 | 1332.6065 | 1016.7287 | 150.0014 | 145.8346 | 762421.5200 |
| 3 | 17:35:02 | 5136.5826 | 70224.6490 | 33088.0590 | 22530.4160 | 1385.1151 | 1016.7287 | 147.5013 | 163.3349 | 759685.2600 |
| 4 | 17:35:42 | 5214.1307 | 70007.8360 | 33293.8760 | 21958.8940 | 1241.7592 | 1047.5658 | 168.3350 | 154.1681 | 755023.8400 |
| 5 | 17:36:22 | 5009.0050 | 68596.1690 | 32538.4010 | 21953.8800 | 1336.7739 | 1014.2284 | 147.5013 | 155.8348 | 762183.6700 |
| x | | 5072.5440 | 69150.2680 | 33033.3500 | 21820.0440 | 1311.4367 | 1017.5621 | 150.8347 | 152.1681 | 758237.2800 |
| %RSD | | 2.282 | 1.446 | 1.206 | 2.499 | 4.499 | 1.927 | 6.867 | 5.620 | 0.612 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 4628.7852 | 267.5043 | 1007.5609 | 167.5017 | 450.0122 | 844323.0100 | 113.7508 | 30.0001 | 81.2504 |
| 2 | 17:34:21 | 4688.8187 | 230.0032 | 965.0559 | 162.5016 | 430.0111 | 856919.1200 | 103.7507 | 32.5001 | 83.7504 |
| 3 | 17:35:02 | 4571.2534 | 250.0038 | 1087.5710 | 172.5018 | 370.0082 | 857997.0200 | 108.7507 | 32.5001 | 76.2503 |
| 4 | 17:35:42 | 4678.8131 | 232.5032 | 1055.0668 | 160.0015 | 407.5100 | 852722.0800 | 98.7506 | 30.0001 | 86.2504 |
| 5 | 17:36:22 | 4526.2289 | 202.5025 | 1080.0700 | 165.0016 | 357.5077 | 858458.6200 | 102.5006 | 52.5002 | 96.2506 |
| x | | 4618.7799 | 236.5034 | 1039.0649 | 165.5016 | 403.0098 | 854083.9700 | 105.5007 | 35.5001 | 84.7504 |
| %RSD | | 1.509 | 10.265 | 4.992 | 2.906 | 9.704 | 0.692 | 5.532 | 27.000 | 8.751 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 68.7503 | 160.0015 | 740757.2600 | 240.0035 | 112.5008 | 15885.1260 | 28511.1900 | 1186977.2000 | 215.0028 |
| 2 | 17:34:21 | 77.5004 | 197.5023 | 752079.6300 | 242.5035 | 115.0008 | 16501.3210 | 29494.6040 | 1213880.9000 | 232.5032 |
| 3 | 17:35:02 | 66.2503 | 170.0017 | 754761.6000 | 262.5041 | 120.0009 | 16563.9460 | 29579.9050 | 1208363.7000 | 223.7530 |
| 4 | 17:35:42 | 62.5002 | 172.5018 | 747425.0000 | 277.5046 | 147.5013 | 16533.8860 | 29135.8450 | 1202691.8000 | 241.2535 |
| 5 | 17:36:22 | 62.5002 | 200.0024 | 754950.0800 | 257.5040 | 135.0011 | 16260.8490 | 28967.7610 | 1218739.3000 | 226.2531 |
| x | | 67.5003 | 180.0020 | 749994.7200 | 256.0039 | 126.0010 | 16349.0260 | 29137.8610 | 1206130.6000 | 227.7531 |
| %RSD | | 9.166 | 9.870 | 0.799 | 6.004 | 11.789 | 1.748 | 1.480 | 1.018 | 4.311 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:33:41 | 506.2654 | 25885.1400 | 21763.3820 | 54527.8150 | 847443.4200 | 2.5000 |
| 2 | 17:34:21 | 527.5167 | 26695.1900 | 22114.3040 | 55635.0980 | 855531.8600 | 5.0000 |
| 3 | 17:35:02 | 526.2666 | 27618.1900 | 22385.0250 | 55554.5630 | 859117.9000 | 0.0000 |
| 4 | 17:35:42 | 476.2636 | 27244.4630 | 21983.9590 | 55969.8280 | 859668.0300 | 0.0000 |
| 5 | 17:36:22 | 575.0198 | 26858.2120 | 21971.4260 | 54774.4250 | 867020.6800 | 0.0000 |
| x | | 522.2664 | 26860.2390 | 22043.6190 | 55292.3460 | 857756.3800 | 1.5000 |
| %RSD | | 6.903 | 2.427 | 1.037 | 1.107 | 0.830 | 149.071 |

**MF9M40-5x** 06/17/2015 17:37:24

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 228617.7000 | 342.5070 | 91297.3880 | 949742.9200 | 117238.9400 | 123965.2400 | τ28530687.0000 | τ1261926.6000 | 127878.7100 |
| 2 | 17:38:44 | 228086.7700 | 352.5075 | 91807.9520 | 948218.0500 | 116123.4800 | 123792.7000 | τ28631569.0000 | 1276467.4000 | 128289.9600 |
| 3 | 17:39:24 | 226204.8400 | 345.8405 | 92407.0180 | 937227.8200 | 117421.4800 | 125228.9200 | τ29193037.0000 | τ1277946.2000 | 130153.5200 |
| 4 | 17:40:05 | 227125.2100 | 326.6731 | 93195.7290 | 952676.1000 | 116164.0400 | 124315.3900 | τ28653983.0000 | τ1274433.7000 | 130912.7800 |
| 5 | 17:40:45 | 226870.0600 | 317.5061 | 90650.3820 | 937395.1700 | 114582.3700 | 122904.7000 | τ28444980.0000 | τ1243084.4000 | 129970.7000 |
| x | | 227380.9200 | 337.0068 | 91871.6940 | 945052.0100 | 116306.0600 | 124041.3900 | τ28690851.0000 | τ1266771.7000 | 129441.1300 |
| %RSD | | 0.425 | 4.289 | 1.070 | 0.767 | 0.975 | 0.680 | τ1.021 | τ1.159 | 1.001 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 481308.0700 | 22896.4120 | 69591.8730 | 49081.6160 | 870698.6200 | τ2245932.8000 | τ15599784.0000 | 371719.6600 | 24781.7940 |
| 2 | 17:38:44 | 484647.2500 | 22954.0700 | 70237.2540 | 49519.1930 | 878009.2700 | τ2241817.4000 | τ15536480.0000 | 369008.0500 | 25012.4810 |
| 3 | 17:39:24 | 483475.8100 | 23119.5260 | 70204.4800 | 49106.7630 | 869815.6600 | τ2246197.9000 | τ15617681.0000 | 370345.4600 | 25220.6070 |
| 4 | 17:40:05 | 489085.6200 | 22853.7950 | 69291.8890 | 49483.9850 | 872456.5000 | τ2239627.2000 | τ15574636.0000 | 368778.2000 | 25832.4770 |
| 5 | 17:40:45 | 484882.8800 | 22678.3160 | 67935.7920 | 48634.0030 | 870374.7700 | τ2202630.5000 | τ15314032.0000 | 363469.9500 | 24267.7840 |
| x | | 484679.9300 | 22900.4240 | 69452.2580 | 49165.1120 | 872270.9600 | τ2235241.2000 | τ15528523.0000 | 368664.2600 | 25023.0290 |
| %RSD | | 0.586 | 0.699 | 1.352 | 0.733 | 0.385 | τ0.825 | τ0.797 | 0.850 | 2.298 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 8499.3321 | 66300.1980 | 31481.8540 | 45835.7090 | 2004.4077 | 970.0565 | 165.0016 | 140.0012 | 755051.1500 |
| 2 | 17:38:44 | 8559.3935 | 67330.9130 | 31700.1800 | 45815.5990 | 2074.4248 | 1054.2333 | 160.8349 | 117.5008 | 764453.0900 |
| 3 | 17:39:24 | 8644.4813 | 66839.4800 | 32553.4600 | 46434.0080 | 2106.0994 | 1023.3962 | 161.6682 | 137.5011 | 759496.6800 |
| 4 | 17:40:05 | 8679.5177 | 67409.0400 | 32041.4810 | 45684.8840 | 2081.9267 | 1025.8965 | 134.1678 | 142.5012 | 769300.1400 |
| 5 | 17:40:45 | 8651.9891 | 65655.1210 | 31506.9490 | 45863.3610 | 2008.5754 | 995.0594 | 175.0018 | 134.1678 | 768506.7000 |
| x | | 8606.9427 | 66706.9500 | 31856.7850 | 45926.7120 | 2055.0868 | 1013.7284 | 159.3349 | 134.3344 | 763361.5500 |
| %RSD | | 0.872 | 1.105 | 1.410 | 0.635 | 2.234 | 3.173 | 9.511 | 7.371 | 0.794 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 5346.7147 | 400.0096 | 1285.0991 | 262.5041 | 542.5177 | 833299.3800 | 192.5022 | 47.5001 | 155.0014 |
| 2 | 17:38:44 | 5546.8454 | 340.0069 | 1200.0864 | 195.0023 | 535.0172 | 844336.8100 | 212.5027 | 50.0001 | 196.2523 |
| 3 | 17:39:24 | 5394.2453 | 337.5068 | 1245.0930 | 247.5037 | 602.5218 | 848919.1400 | 225.0030 | 87.5005 | 196.2523 |
| 4 | 17:40:05 | 5391.7437 | 330.0065 | 1232.5912 | 242.5035 | 600.0216 | 840807.8400 | 225.0030 | 62.5002 | 175.0018 |
| 5 | 17:40:45 | 5226.6386 | 357.5077 | 1337.6073 | 230.0032 | 605.0220 | 846931.3300 | 215.0028 | 40.0001 | 183.7520 |
| x | | 5381.2375 | 353.0075 | 1260.0954 | 235.5034 | 577.0200 | 842858.9000 | 214.0028 | 57.5002 | 181.2520 |
| %RSD | | 2.135 | 7.972 | 4.202 | 10.810 | 6.077 | 0.729 | 6.215 | 32.391 | 9.494 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 182.5020 | 485.0141 | 741193.6200 | 410.0101 | 262.5041 | 30355.1860 | 51976.5900 | 1182884.4000 | 285.0049 |
| 2 | 17:38:44 | 195.0023 | 550.0181 | 754611.3700 | 472.5134 | 230.0032 | 30079.1880 | 52854.5870 | 1190454.8000 | 293.7552 |
| 3 | 17:39:24 | 225.0030 | 505.0153 | 743509.4000 | 360.0078 | 307.5057 | 30054.0970 | 53959.1320 | 1200686.1000 | 320.0061 |
| 4 | 17:40:05 | 230.0032 | 557.5187 | 752388.2000 | 347.5073 | 292.5051 | 30578.5000 | 53352.7460 | 1190061.7000 | 298.7554 |
| 5 | 17:40:45 | 227.5031 | 507.5155 | 753406.8600 | 457.5126 | 267.5043 | 29813.2350 | 52049.5430 | 1208884.2000 | 308.7557 |
| x | | 212.0027 | 521.0163 | 749021.8900 | 409.5102 | 272.0045 | 30176.0410 | 52838.5190 | 1194594.2000 | 301.2555 |
| %RSD | | 10.260 | 5.999 | 0.827 | 13.688 | 10.960 | 0.980 | 1.608 | 0.854 | 4.498 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:38:04 | 673.7772 | 54354.1860 | 44686.9950 | 110487.6300 | 841181.6400 | 0.0000 |
| 2 | 17:38:44 | 796.2880 | 53360.2940 | 44651.8070 | 111419.9200 | 846844.3700 | 0.0000 |
| 3 | 17:39:24 | 751.2839 | 55237.4660 | 45546.6310 | 111924.1100 | 851792.6000 | 2.5000 |
| 4 | 17:40:05 | 742.5331 | 54625.9550 | 45699.9670 | 113809.3800 | 854903.2400 | 2.5000 |
| 5 | 17:40:45 | 752.5340 | 54354.1860 | 43927.9760 | 111500.9900 | 856184.0100 | 0.0000 |
| x | | 743.2832 | 54386.4180 | 44902.6750 | 111828.4100 | 850181.1700 | 1.0000 |
| %RSD | | 5.938 | 1.246 | 1.617 | 1.096 | 0.728 | 136.931 |

**MF9M41-5x** 06/17/2015 17:41:47

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 231146.0200 | 290.8384 | 91032.0090 | 772236.4800 | 95974.5020 | 102405.3700 | ↹29916222.0000 | ↹1206328.2000 | 43096.1490 |
| 2 | 17:43:09 | 232572.4000 | 263.3375 | 92237.6580 | 778594.2000 | 97987.7280 | 102865.9900 | ↹30270712.0000 | 1222373.3000 | 43211.7460 |
| 3 | 17:43:49 | 229200.0300 | 316.6727 | 92765.9740 | 792640.3200 | 98660.5980 | 105265.6800 | ↹30447988.0000 | 1244586.7000 | 43224.3100 |
| 4 | 17:44:30 | 229839.8000 | 326.6731 | 92826.6440 | 788180.6100 | 97775.2550 | 103524.0600 | ↹30151303.0000 | 1233598.6000 | 42927.7840 |
| 5 | 17:45:10 | 233541.4400 | 296.6720 | 92831.6990 | 780385.7200 | 96900.1210 | 101620.8500 | ↹29725051.0000 | ↹1188213.6000 | 42694.0880 |
| x | | 231259.9400 | 298.8387 | 92338.7970 | 782407.4700 | 97459.6410 | 103136.3900 | ↹30102255.0000 | ↹1219020.1000 | 43030.8150 |
| %RSD | | 0.786 | 8.234 | 0.836 | 1.031 | 1.069 | 1.335 | ↹0.950 | ↹1.829 | 0.518 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 490877.7800 | 23921.7860 | 72957.9800 | 49730.4460 | 827091.7800 | ↹1907507.7000 | ↹14868295.0000 | 352008.3200 | 27904.1400 |
| 2 | 17:43:09 | 491477.8900 | 24089.7690 | 73447.2500 | 49773.2000 | 840261.6600 | ↹1930805.0000 | ↹14945298.0000 | 351857.1300 | 28373.2200 |
| 3 | 17:43:49 | 500718.1100 | 24343.0030 | 73729.7280 | 49941.7030 | 840032.7100 | ↹1937947.7000 | ↹14961566.0000 | 355619.3900 | 28461.0190 |
| 4 | 17:44:30 | 496577.2700 | 23986.9730 | 73916.3700 | 49863.7390 | 836113.9600 | 1879437.1000 | ↹14740831.0000 | 348119.9800 | 28195.1170 |
| 5 | 17:45:10 | 497409.7900 | 23435.4070 | 73570.8330 | 49378.3610 | 828777.5600 | ↹1910074.6000 | ↹14549152.0000 | 345275.2200 | 28139.9310 |
| x | | 495412.1700 | 23955.3870 | 73524.4320 | 49737.4900 | 834455.5300 | ↹1913154.4000 | ↹14813028.0000 | 350576.0100 | 28214.6860 |
| %RSD | | 0.842 | 1.386 | 0.493 | 0.436 | 0.744 | ↹1.199 | ↹1.157 | 1.134 | 0.769 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 7458.3361 | 80241.9750 | 38086.8380 | 15632.1480 | 1650.1634 | 991.7257 | 160.8349 | 157.5015 | 760128.0300 |
| 2 | 17:43:09 | 7435.8160 | 82069.6450 | 38915.6540 | 16185.7030 | 1590.9852 | 1055.0668 | 185.8354 | 134.1678 | 768074.4400 |
| 3 | 17:43:49 | 7315.7098 | 81365.2890 | 39199.4800 | 16085.5100 | 1639.3279 | 1010.0612 | 159.1682 | 141.6679 | 771801.3100 |
| 4 | 17:44:30 | 7503.3765 | 81847.4760 | 39330.0930 | 16341.0060 | 1636.8274 | 977.5573 | 160.8349 | 139.1678 | 768802.1800 |
| 5 | 17:45:10 | 7570.9376 | 79358.5760 | 37880.9030 | 15782.4310 | 1620.1575 | 984.2248 | 141.6679 | 155.8348 | 773304.0000 |
| x | | 7456.8352 | 80976.5920 | 38682.5930 | 16005.3600 | 1627.4923 | 1003.7272 | 161.6683 | 145.6680 | 768421.9900 |
| %RSD | | 1.264 | 1.416 | 1.704 | 1.823 | 1.417 | 3.105 | 9.740 | 7.150 | 0.665 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 6042.1897 | 275.0045 | 1290.0999 | 160.0015 | 487.5143 | 847811.9800 | 127.5010 | 62.5002 | 86.2504 |
| 2 | 17:43:09 | 6194.8017 | 272.5045 | 1282.5987 | 262.5041 | 472.5134 | 838899.1000 | 130.0010 | 47.5001 | 121.2509 |
| 3 | 17:43:49 | 6134.7573 | 295.0052 | 1277.5979 | 170.0017 | 507.5155 | 846848.5100 | 105.0007 | 45.0001 | 111.2507 |
| 4 | 17:44:30 | 6029.6806 | 290.0051 | 1360.1110 | 185.0021 | 495.0147 | 854468.0700 | 148.7513 | 45.0001 | 108.7507 |
| 5 | 17:45:10 | 6199.8054 | 325.0063 | 1205.0871 | 195.0023 | 482.5140 | 857518.8600 | 156.2515 | 47.5001 | 93.7505 |
| x | | 6120.2469 | 291.5051 | 1283.0989 | 194.5024 | 489.0144 | 849109.3000 | 133.5011 | 49.5001 | 104.2507 |
| %RSD | | 1.327 | 7.216 | 4.286 | 20.734 | 2.696 | 0.854 | 15.031 | 14.897 | 13.502 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 78.7504 | 207.5026 | 752418.2400 | 317.5061 | 132.5011 | 22568.0180 | 39380.3290 | 1203220.6000 | 291.2551 |
| 2 | 17:43:09 | 88.7505 | 205.0025 | 755195.9300 | 355.0076 | 155.0014 | 22708.3980 | 39385.3530 | 1190770.5000 | 313.7559 |
| 3 | 17:43:49 | 68.7503 | 175.0018 | 757616.5500 | 422.5107 | 117.5008 | 22979.1390 | 40219.3220 | 1210526.4000 | 313.7559 |
| 4 | 17:44:30 | 53.7502 | 227.5031 | 752284.4300 | 265.0042 | 135.0011 | 22768.5620 | 39925.4140 | 1203887.4000 | 295.0052 |
| 5 | 17:45:10 | 70.0003 | 195.0023 | 753450.5600 | 377.5086 | 115.0008 | 22427.6390 | 39274.8330 | 1208806.5000 | 343.7571 |
| x | | 72.0003 | 202.0025 | 754193.1400 | 347.5074 | 131.0010 | 22690.3510 | 39637.0500 | 1203442.3000 | 311.5058 |
| %RSD | | 18.026 | 9.482 | 0.297 | 17.199 | 12.264 | 0.919 | 1.042 | 0.643 | 6.681 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:42:27 | 747.5335 | 26216.1720 | 22259.6900 | 55139.3190 | 858122.7800 | 7.5000 |
| 2 | 17:43:09 | 756.2843 | 26288.9010 | 21938.8410 | 55194.6840 | 850660.2200 | 0.0000 |
| 3 | 17:43:49 | 802.5386 | 26534.6780 | 21893.7220 | 55466.4800 | 858645.2100 | 0.0000 |
| 4 | 17:44:30 | 767.5354 | 26890.8170 | 21951.3740 | 54945.5460 | 856034.7800 | 0.0000 |
| 5 | 17:45:10 | 787.5372 | 26010.5300 | 21570.3810 | 54988.3260 | 861767.9600 | 0.0000 |
| x | | 772.2858 | 26388.2200 | 21922.8020 | 55146.8710 | 857046.1900 | 1.5000 |
| %RSD | | 2.924 | 1.280 | 1.116 | 0.374 | 0.480 | 223.607 |

**CCV3** 06/17/2015 17:46:44

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | 208586.5700 | ┬1449133.2000 | ┬71501815.0000 | ┬37624343.0000 | ┬4651407.4000 | ┬4864373.4000 | ┬100644370.0000 | ┬28984018.0000 | 1265636.9000 |
| 2 | 17:48:04 | 205814.7500 | ┬1458099.0000 | ┬70836135.0000 | ┬38083829.0000 | ┬4717501.6000 | ┬4890495.8000 | ┬100916610.0000 | ┬29126664.0000 | 1279982.9000 |
| 3 | 17:48:44 | 206647.4800 | ┬1461060.1000 | ┬71841701.0000 | ┬38275931.0000 | ┬4743339.7000 | ┬4902334.7000 | ┬101536550.0000 | ┬29593040.0000 | 1300616.6000 |
| 4 | 17:49:25 | 207492.2500 | ┬1451328.9000 | ┬72756049.0000 | ┬38379854.0000 | ┬4753879.5000 | ┬4960043.7000 | ┬101911200.0000 | ┬29823224.0000 | 1291025.2000 |
| 5 | 17:50:05 | 207341.0600 | ┬1439167.6000 | ┬71008701.0000 | ┬37700999.0000 | ┬4730206.5000 | ┬4825405.5000 | ┬100647060.0000 | ┬29461283.0000 | 1288314.8000 |
| x | | 207176.4200 | ┬1451757.8000 | ┬71588880.0000 | ┬38012991.0000 | ┬4719266.9000 | ┬4888530.6000 | ┬101131160.0000 | ┬29397646.0000 | 1285115.3000 |
| %RSD | | 0.497 | ┬0.589 | ┬1.068 | ┬0.889 | ┬0.855 | ┬1.016 | ┬0.562 | ┬1.163 | 1.023 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | 437974.6000 | 52.5002 | ┬7251086.5000 | ┬6837772.1000 | ┬3477387.6000 | ┬9139335.3000 | ┬57969105.0000 | 1426727.5000 | ┬9240405.1000 |
| 2 | 17:48:04 | 439515.1200 | 47.5001 | ┬7397704.2000 | ┬6928131.7000 | ┬3463207.8000 | ┬9174113.9000 | ┬58199396.0000 | 1436358.3000 | ┬9343033.0000 |
| 3 | 17:48:44 | 446595.8300 | 37.5001 | ┬7423306.6000 | ┬6924857.8000 | ┬3533967.2000 | ┬9142683.4000 | ┬58476931.0000 | 1449693.8000 | ┬9422743.9000 |
| 4 | 17:49:25 | 448170.8500 | 52.5002 | ┬7337815.8000 | ┬6929864.1000 | ┬3521629.7000 | ┬9276092.0000 | ┬58385579.0000 | 1440866.2000 | ┬9445470.4000 |
| 5 | 17:50:05 | 447227.1200 | 47.5001 | ┬7396597.3000 | ┬6961921.1000 | ┬3490283.4000 | ┬9115577.6000 | ┬57629468.0000 | 1437561.7000 | ┬9310958.1000 |
| x | | 443896.7000 | 47.5001 | ┬7361302.1000 | ┬6916509.3000 | ┬3497295.1000 | ┬9169560.4000 | ┬58132096.0000 | 1438241.5000 | ┬9352522.1000 |
| %RSD | | 1.074 | 12.892 | ┬0.939 | ┬0.672 | ┬0.851 | ┬0.688 | ┬0.588 | 0.576 | ┬0.894 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | 2033663.7000 | ┬4726429.5000 | ┬2227282.7000 | 1284903.4000 | 1030292.2000 | 28450.9850 | 11136.6030 | 128.3343 | 662210.9300 |
| 2 | 17:48:04 | 2062398.8000 | ┬4797627.9000 | ┬2263858.5000 | 1288227.8000 | 1044318.5000 | 28675.0840 | 11303.4940 | 135.0011 | 666982.3500 |
| 3 | 17:48:44 | 2064849.0000 | ┬4783228.2000 | ┬2277736.2000 | 1296570.3000 | 1047504.5000 | 28568.8870 | 11380.2650 | 146.6680 | 664995.0600 |
| 4 | 17:49:25 | 2084584.0000 | ┬4811288.0000 | ┬2286857.5000 | 1313307.7000 | 1050929.9000 | 29318.9860 | 11267.6120 | 155.0014 | 676026.8700 |
| 5 | 17:50:05 | 2040067.6000 | ┬4765975.8000 | ┬2250296.8000 | 1293086.0000 | 1043690.8000 | 28889.9910 | 11328.5280 | 142.5012 | 671718.5200 |
| x | | 2057112.6000 | ┬4776909.9000 | ┬2261206.3000 | 1295219.0000 | 1043347.2000 | 28780.7870 | 11283.3010 | 141.5012 | 668386.7400 |
| %RSD | | 0.997 | ┬0.688 | ┬1.039 | 0.854 | 0.752 | 1.186 | 0.813 | 7.289 | 0.823 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | 167.5017 | 130.0010 | 257.5040 | 120.0009 | 267.5043 | 747954.5000 | 585475.1500 | 75523.1810 | 565963.9600 |
| 2 | 17:48:04 | 182.5020 | 137.5011 | 287.5050 | 87.5005 | 212.5027 | 747602.4100 | 597689.4200 | 75000.9970 | 568845.5900 |
| 3 | 17:48:44 | 160.0015 | 162.5016 | 250.0038 | 85.0004 | 282.5048 | 739541.0300 | 599028.1000 | 75392.0010 | 578505.2400 |
| 4 | 17:49:25 | 172.5018 | 155.0014 | 255.0039 | 95.0005 | 262.5041 | 752833.3400 | 612223.4800 | 76148.8360 | 587243.3000 |
| 5 | 17:50:05 | 155.0014 | 152.5014 | 210.0027 | 82.5004 | 215.0028 | 757392.4900 | 593634.4000 | 74940.4560 | 566789.8600 |
| x | | 167.5017 | 147.5013 | 252.0039 | 94.0005 | 248.0037 | 749064.7500 | 597610.1100 | 75401.0940 | 573469.5900 |
| %RSD | | 6.420 | 9.048 | 10.989 | 16.243 | 12.957 | 0.890 | 1.628 | 0.645 | 1.602 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | 1161131.2000 | ┬2772928.3000 | 679538.4500 | 60.0002 | ┬3378445.7000 | 666444.2500 | 1196681.8000 | 1092423.8000 | ┬4786611.0000 |
| 2 | 17:48:04 | 1166836.8000 | ┬2778397.2000 | 673377.1900 | 70.0003 | ┬3390422.1000 | 676229.8900 | 1206753.5000 | 1089634.0000 | ┬4813145.1000 |
| 3 | 17:48:44 | 1171336.0000 | ┬2764541.6000 | 672343.5300 | 62.5002 | ┬3375963.4000 | 676457.2800 | 1212807.7000 | 1085982.8000 | ┬4858278.7000 |
| 4 | 17:49:25 | 1181598.4000 | ┬2789446.5000 | 683707.0900 | 57.5002 | ┬3441551.6000 | 686129.5600 | 1204491.0000 | 1097881.0000 | ┬4883287.9000 |
| 5 | 17:50:05 | 1164869.1000 | ┬2781809.2000 | 689363.2900 | 52.5002 | ┬3388745.7000 | 676966.2200 | 1198250.0000 | 1100528.5000 | ┬4809324.1000 |
| x | | 1169154.3000 | ┬2777424.6000 | 679665.9100 | 60.5002 | ┬3395025.7000 | 676445.4400 | 1203796.8000 | 1093290.0000 | ┬4830129.4000 |
| %RSD | | 0.673 | ┬0.337 | 1.050 | 10.696 | ┬0.788 | 1.030 | 0.544 | 0.543 | ┬0.817 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:47:24 | ┬11675206.0000 | ┬3822072.2000 | ┬3424377.8000 | ┬8356077.9000 | 738444.9300 | 0.0000 |
| 2 | 17:48:04 | ┬11759583.0000 | ┬3807851.0000 | ┬3433971.9000 | ┬8472006.5000 | 738360.4100 | 10.0000 |
| 3 | 17:48:44 | ┬11862618.0000 | ┬3858444.5000 | ┬3492206.8000 | ┬8640046.2000 | 745315.5500 | 2.5000 |
| 4 | 17:49:25 | ┬11918971.0000 | ┬3861405.0000 | ┬3489878.8000 | ┬8598360.9000 | 753596.6700 | 7.5000 |
| 5 | 17:50:05 | ┬11789995.0000 | ┬3826001.9000 | ┬3456264.1000 | ┬8539900.6000 | 756713.5200 | 5.0000 |
| x | | ┬11801275.0000 | ┬3835154.9000 | ┬3459339.9000 | ┬8521278.4000 | 746486.2200 | 5.0000 |
| %RSD | | ┬0.797 | ┬0.616 | ┬0.901 | ┬1.314 | 1.135 | 79.057 |

**CCB3** 06/17/2015 17:51:09

User Pre-dilution: 1.00

| Run | Time | 6Li | 9Be | 23Na | 24Mg | 25Mg | 26Mg | 27Al | 39K | 44Ca |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 229217.1600 | 389.1758 | 48586.2260 | 7688.5452 | 910.0497 | 1000.0600 | 23290.0000 | 50666.0560 | 547.5180 |
| 2 | 17:52:30 | 230994.4100 | 331.6733 | 45549.1440 | 6297.3785 | 735.0324 | 895.0481 | 19678.2070 | 50258.6000 | 510.0156 |
| 3 | 17:53:10 | 231973.5500 | 272.5045 | 43121.2790 | 5176.6073 | 670.0269 | 685.0282 | 16158.1500 | 48455.4680 | 502.5152 |
| 4 | 17:53:51 | 234909.0900 | 215.0028 | 41754.3440 | 4211.0637 | 520.0162 | 555.0185 | 14016.7780 | 47288.7940 | 470.0133 |
| 5 | 17:54:31 | 234275.7900 | 176.6685 | 38365.6120 | 3310.6575 | 480.0138 | 470.0133 | 11790.8360 | 45400.8380 | 392.5092 |
| x | | 232274.0000 | 277.0050 | 43475.3210 | 5336.8505 | 663.0278 | 721.0336 | 16986.7940 | 48413.9510 | 484.5143 |
| %RSD | | 1.010 | 31.004 | 8.880 | 32.253 | 26.145 | 31.012 | 26.894 | 4.480 | 12.043 |

| Run | Time | 45Sc | 47Ti | 51V | 52Cr | 54Fe | 55Mn | 56Fe | 57Fe | 59Co |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 466902.1700 | 22.5000 | 1945.2270 | 2562.8940 | 3208.1174 | 1840.2032 | 108810.7800 | 1145.0787 | 1912.7195 |
| 2 | 17:52:30 | 478758.5700 | 32.5001 | 1565.1470 | 2155.2787 | 3100.5767 | 1560.1460 | 107944.6200 | 957.5550 | 1482.6319 |
| 3 | 17:53:10 | 486495.4100 | 25.0000 | 1160.0807 | 1830.2010 | 3063.0628 | 1317.6042 | 108086.4400 | 992.5591 | 1240.0923 |
| 4 | 17:53:51 | 484957.0100 | 45.0001 | 1052.5665 | 1765.1869 | 2920.5117 | 1132.5770 | 107929.4300 | 982.5579 | 1065.0681 |
| 5 | 17:54:31 | 492172.1200 | 22.5000 | 982.5579 | 1602.6541 | 2760.4571 | 920.0508 | 105759.3700 | 960.0553 | 712.5305 |
| x | | 481857.0600 | 29.5001 | 1341.1158 | 1983.2429 | 3010.5452 | 1354.1162 | 107706.1300 | 1007.5612 | 1282.6084 |
| %RSD | | 1.998 | 32.492 | 30.282 | 19.224 | 5.766 | 26.564 | 1.065 | 7.770 | 35.110 |

| Run | Time | 60Ni | 63Cu | 65Cu | 66Zn | 75As | 78Se | 82Se | 83Kr | 89Y |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 442.5118 | 3728.3338 | 1607.6551 | 615.0227 | 320.0061 | 1111.7408 | 129.1677 | 121.6676 | 717803.0100 |
| 2 | 17:52:30 | 400.0096 | 3578.2681 | 1477.6310 | 597.5214 | 253.3372 | 1138.4111 | 118.3342 | 131.6677 | 733165.4100 |
| 3 | 17:53:10 | 310.0058 | 3313.1585 | 1352.6098 | 545.0178 | 220.0029 | 1150.9128 | 141.6679 | 130.8344 | 735519.9500 |
| 4 | 17:53:51 | 255.0039 | 3123.0851 | 1292.6002 | 477.5137 | 160.0015 | 1152.5797 | 131.6677 | 134.1678 | 741152.7100 |
| 5 | 17:54:31 | 207.5026 | 3045.5564 | 1295.1006 | 462.5128 | 160.8349 | 1098.4057 | 113.3341 | 141.6679 | 747315.8300 |
| x | | 323.0067 | 3357.6804 | 1405.1193 | 539.5177 | 222.8365 | 1130.4100 | 126.8343 | 132.0011 | 734991.3800 |
| %RSD | | 30.312 | 8.689 | 9.667 | 12.731 | 30.248 | 2.144 | 8.844 | 5.442 | 1.504 |

| Run | Time | 94Mo | 95Mo | 96Mo | 97Mo | 98Mo | 103Rh | 107Ag | 108Mo O | 109Ag |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 22.5000 | 15.0000 | 10.0000 | 7.5000 | 0.0000 | 836384.1600 | 436.2614 | 12.5000 | 367.5081 |
| 2 | 17:52:30 | 17.5000 | 15.0000 | 10.0000 | 7.5000 | 5.0000 | 849203.5400 | 283.7548 | 15.0000 | 321.2562 |
| 3 | 17:53:10 | 22.5000 | 12.5000 | 5.0000 | 5.0000 | 12.5000 | 851793.9800 | 313.7559 | 2.5000 | 266.2543 |
| 4 | 17:53:51 | 17.5000 | 5.0000 | 5.0000 | 0.0000 | 7.5000 | 865980.3900 | 222.5030 | 27.5000 | 211.2527 |
| 5 | 17:54:31 | 25.0000 | 10.0000 | 15.0000 | 10.0000 | 7.5000 | 863579.3600 | 138.7512 | 7.5000 | 130.0010 |
| x | | 21.0000 | 11.5000 | 9.0000 | 6.0000 | 6.5000 | 853388.2900 | 279.0053 | 13.0000 | 259.2545 |
| %RSD | | 15.972 | 36.377 | 46.481 | 63.191 | 69.869 | 1.401 | 39.598 | 72.467 | 35.886 |

| Run | Time | 111Cd | 114Cd | 115In | 118Sn | 121Sb | 135Ba | 137Ba | 159Tb | 203Tl |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 242.5035 | 607.5221 | 734271.7500 | 47.5001 | 2928.0143 | 185.0021 | 240.0035 | 1177340.5000 | 1786.4415 |
| 2 | 17:52:30 | 177.5019 | 425.0108 | 748205.6100 | 17.5000 | 2025.2461 | 125.0009 | 217.5028 | 1198746.9000 | 1263.8458 |
| 3 | 17:53:10 | 180.0019 | 330.0065 | 756381.5700 | 32.5001 | 1590.1517 | 97.5006 | 157.5015 | 1210647.2000 | 952.5544 |
| 4 | 17:53:51 | 141.2512 | 352.5075 | 759671.5900 | 67.5003 | 1332.6065 | 67.5003 | 130.0010 | 1205387.9000 | 757.5344 |
| 5 | 17:54:31 | 112.5008 | 235.0033 | 770963.8600 | 37.5001 | 1022.5627 | 60.0002 | 105.0007 | 1226086.6000 | 600.0216 |
| x | | 170.7519 | 390.0101 | 753898.8700 | 40.5001 | 1779.7163 | 107.0008 | 170.0019 | 1203641.8000 | 1072.0796 |
| %RSD | | 28.605 | 35.706 | 1.814 | 45.862 | 41.557 | 47.350 | 33.712 | 1.481 | 43.829 |

| Run | Time | 205Tl | 206Pb | 207Pb | 208Pb | 209Bi | 220Bkg |
|---|---|---|---|---|---|---|---|
| 1 | 17:51:50 | 4159.7880 | 852.5436 | 772.5358 | 2030.2473 | 846739.4700 | 5.0000 |
| 2 | 17:52:30 | 2930.5152 | 737.5326 | 672.5271 | 1665.1664 | 868513.5300 | 0.0000 |
| 3 | 17:53:10 | 2234.0494 | 665.0265 | 535.0172 | 1312.6034 | 886738.8000 | 0.0000 |
| 4 | 17:53:51 | 1800.1944 | 557.5187 | 490.0144 | 1145.0787 | 879699.3400 | 2.5000 |
| 5 | 17:54:31 | 1445.1253 | 422.5107 | 385.0089 | 902.5489 | 899986.1800 | 2.5000 |
| x | | 2513.9345 | 647.0264 | 571.0207 | 1411.1289 | 876335.4600 | 2.0000 |
| %RSD | | 42.715 | 25.533 | 26.756 | 31.433 | 2.294 | 104.583 |

# ALS Environmental - SLC

**Report Generated By CETAC QuickTrace** AACV02
**Analyst:** christopher.hansen Christopher R Hansen
**Worksheet file:** C:\Program Files\QuickTrace\Worksheets\CV2-15168.wsz
**Date Started:** 06/11/2015 09:56:37
**Comment:** Mercury Analysis

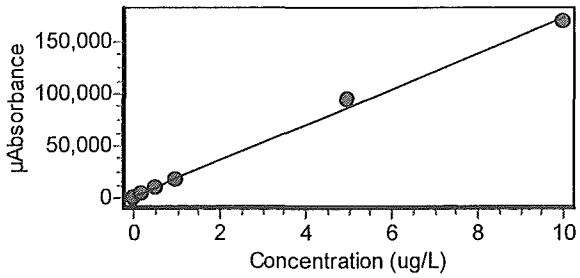
Workorder: 1515559 SDG: MF9M21 Case: 45299 HBN: 150398

## Results

| Sample Name | Type | Date/Time | Conc (ug/L) | µAbs | Flags | calculated Hg (µg/L) | percent difference |
|---|---|---|---|---|---|---|---|
| S0 | STD | 06/11/15 10:51:42 am | 0.0000 | -14 | | -0.0761 | NA |
| S0.2 | STD | 06/11/15 10:52:49 am | 0.2000 | 3899 | | 0.1503 | 24.9% |
| S0.5 | STD | 06/11/15 10:53:57 am | 0.5000 | 9430 | | 0.4703 | 5.9% |
| S1.0 | STD | 06/11/15 10:55:05 am | 1.0000 | 17975 | | 0.9646 | 3.5% |
| S5.0 | STD | 06/11/15 10:56:13 am | 5.0000 | 93820 | | 5.3527 | -7.1% |
| S10 | STD | 06/11/15 10:57:22 am | 10.0000 | 170746 | | 9.8036 | 2.0% |

Calibration

Equation: A = 1301.729 + 17248.310C
R2: 0.99783
SEE: 3593.8240
Flags:




| | | | | | |
|---|---|---|---|---|---|
| ICV1 | ICV | 06/11/15 10:58:30 am | 4.2432 | 74491 | |
| % Recovery 106.08 | | | | | |
| ICB1 | ICB | 06/11/15 10:59:37 am | -0.0800 | -78 | |
| CCV1 | CCV | 06/11/15 11:00:46 am | 4.9685 | 87000 | |
| % Recovery 99.37 | | | | | |
| CCB1 | CCB | 06/11/15 11:01:56 am | -0.0809 | -93 | |

| Sample Name | Type | Date/Time | Conc (ug/L) | µAbs | Flags |
|---|---|---|---|---|---|
| PBS1 | PBK | 06/11/15 11:03:04 am | -0.0747 | 14 | |
| MF9M21 | UNK | 06/11/15 11:04:11 am | 0.0151 | 1562 | |
| MF9M22 | UNK | 06/11/15 11:05:19 am | -0.0223 | 917 | |
| MF9M23 | UNK | 06/11/15 11:06:27 am | -0.0628 | 219 | |
| MF9M24 | UNK | 06/11/15 11:07:35 am | -0.0558 | 339 | |
| MF9M25 | UNK | 06/11/15 11:08:43 am | 0.0100 | 1474 | |
| MF9M26 | UNK | 06/11/15 11:09:51 am | 0.0173 | 1600 | |
| MF9M27 | UNK | 06/11/15 11:11:00 am | -0.0306 | 773 | |
| MF9M27D | UNK | 06/11/15 11:12:08 am | -0.0497 | 445 | |
| MF9M27S | UNK | 06/11/15 11:13:16 am | 2.6933 | 47757 | |
| MF9M28 | UNK | 06/11/15 11:14:24 am | -0.0149 | 1045 | |
| MF9M29 | UNK | 06/11/15 11:15:33 am | -0.0542 | 367 | |
| MF9M30 | UNK | 06/11/15 11:16:41 am | -0.0570 | 319 | |
| CCV2<br>% Recovery 107.88 | CCV | 06/11/15 11:17:50 am | 5.3941 | 94340 | |
| CCB2 | CCB | 06/11/15 11:19:00 am | -0.0814 | -103 | |
| MF9M31 | UNK | 06/11/15 11:20:08 am | 0.0232 | 1702 | |
| MF9M32 | UNK | 06/11/15 11:21:16 am | -0.0372 | 660 | |

| Sample Name | Type | Date/Time | Conc (ug/L) | µAbs | Flags |
|---|---|---|---|---|---|
| MF9M33 | UNK | 06/11/15 11:22:25 am | -0.0371 | 661 | |
| MF9M34 | UNK | 06/11/15 11:23:34 am | 0.0126 | 1519 | |
| MF9M35 | UNK | 06/11/15 11:24:43 am | 0.0049 | 1387 | |
| MF9M37 | UNK | 06/11/15 11:25:51 am | -0.0023 | 1263 | |
| MF9M38 | UNK | 06/11/15 11:27:00 am | -0.0177 | 996 | |
| MF9M39 | UNK | 06/11/15 11:28:10 am | -0.0183 | 986 | |
| MF9M40 | UNK | 06/11/15 11:29:19 am | -0.0104 | 1122 | |
| MF9M41 | UNK | 06/11/15 11:30:28 am | -0.0125 | 1086 | |
| CCV3 | CCV | 06/11/15 11:31:37 am | 5.5348 | 96768 | |
| % Recovery 110.70 | | | | | |
| CCB3 | CCB | 06/11/15 11:32:47 am | -0.0806 | -89 | |

# *Analysis Parameters*

## Instrument M-7500 Mercury Analyzer

### Conditions

| Gas flow (mL/min) | Sample Uptake (s) | Rinse (s) | Read delay (s) | Replicates (#) | Replicate time (s) | Pump speed (%) | Wavelength (nm) |
|---|---|---|---|---|---|---|---|
| 215 | 20.00 | 40.00 | 34.00 | 1 | 2.00 | 100 | 253.65 |

| ASX Pump Rate (%) |
|---|
| 100 |

### Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

### Baseline Correction

| #1 Start time (s) | #1 End time (s) | #2 Start time (s) | #2 End time (s) |
|---|---|---|---|
| 7.00 | 12.00 | | |

### Standby Mode

Enabled: Yes

Standby Options: gas off, lamp off

### Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

## Calibration

### Settings

| Algorithm | Through blank | Weighted fit | Cal. Type | Racalibration rate | Reslope rate | Reslope standard |
|---|---|---|---|---|---|---|
| Linear | No | No | Normal | 0 | 0 | N/A |

### Limits

| Calibration slope | | Reslope | | Coeff. of Determination |
|---|---|---|---|---|
| Lower (%) | Upper (%) | Lower (%) | Upper (%) | |
| 20 | 150 | 75 | 125 | 0.99500 |

Error action: Stop analysis

## QC

GLP Override: Yes

### QC Tests

## PBK

| Concentration (ug/L) |
|---|
| 0.2000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## CCB

| Concentration (ug/L) |
|---|
| 0.2000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## ICB

| Concentration (ug/L) |
|---|
| 0.2000 |

Failure flag: Z

Error action for manually inserted QC: Stop analysis

## CCV

| Concentration (ug/L) | Low Limit % | High Limit % |
|---|---|---|
| 5.0000 | 85.0000 | 115.0000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## ICV

| Concentration (ug/L) | Low Limit % | High Limit % |
|---|---|---|
| 4.0000 | 85.0000 | 115.0000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## ISM 3050B PHYSICAL DESCRIPTION

| Sample ID | Matrix | Method | Prep Date | Amount Sample Used(g) | Final Sample Volume | PH | Color/Clarity/Texture Before Color | Before Texture | After Color | After Clarity | Init. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PBS1 | ASTM Type II $H_2O$ | 3050B | 06/09/2015 | NA | 100 mL | NA | Colorless | Clear | Colorless | Clear | SS |
| LCS1 | ASTM Type II $H_2O$ | | | NA | | | Colorless | Clear | Colorless | Clear | |
| MF9M21 | Soil | | | 1.1255 | | | Brown | Medium | Yellow | Clear | |
| MF9M22 | | | | 1.2660 | | | Brown | Medium | Yellow | Clear | |
| MF9M23 | | | | 1.1046 | | | Brown | Medium | Yellow | Clear | |
| MF9M24 | | | | 1.1556 | | | Brown | Medium | Yellow | Clear | |
| MF9M25 | | | | 1.2142 | | | Brown | Medium | Yellow | Clear | |
| MF9M26 | | | | 1.3580 | | | Brown | Medium | Yellow | Clear | |
| MF9M27 | | | | 1.3102 | | | Brown | Medium | Yellow | Clear | |
| MF9M27S | | | | 1.3127 | | | Brown | Medium | Yellow | Clear | |
| MF9M27D | | | | 1.3151 | | | Brown | Medium | Yellow | Clear | |
| MF9M28 | | | | 1.1621 | | | Brown | Medium | Yellow | Clear | |
| MF9M29 | | | | 1.2979 | | | Brown | Medium | Yellow | Clear | |
| MF9M30 | | | | 1.2514 | | | Brown | Medium | Yellow | Clear | |
| MF9M31 | | | | 1.3282 | | | Brown | Medium | Yellow | Clear | |
| MF9M32 | | | | 1.3691 | | | Brown | Medium | Yellow | Clear | |
| MF9M33 | | | | 1.1003 | | | Brown | Medium | Yellow | Clear | |
| MF9M34 | | | | 1.3381 | | | Brown | Medium | Yellow | Clear | |
| MF9M35 | | | | 1.2257 | | | Brown | Medium | Yellow | Clear | |
| MF9M37 | | | | 1.2502 | | | Brown | Medium | Yellow | Clear | |
| MF9M38 | | | | 1.1247 | | | Brown | Medium | Yellow | Clear | |
| MF9M39 | | | | 1.1443 | | | Brown | Medium | Yellow | Clear | |
| MF9M40 | ↓ | ↓ | ↓ | 1.3847 | ↓ | ↓ | Brown | Medium | Yellow | Clear | ↓ |

**PREPARED BY:**
Shane Stewart
Shaina Wiest

**START DATE/TIME:**
06/09/2015 14:21
**END DATE/TIME:**
06/11/2015 09:45
**WORKORDER(S):**
1515559

**SDG:**
MF9M21
**CASE:**
45299
**METHOD/MATRIX:**
3050B/Soil
**BATCH:**
5369
**HBN #:**
150204
**MOD:**
NA

ALS

| QC ID | QC TYPE | MATRIX SOURCE | SPIKE SOURCE | PIPETTE ID | VOLUME SPIKED | INITIALS | Method Reagents |
|---|---|---|---|---|---|---|---|
| PBS1 | PBS | ASTM Type II $H_2O$ | NA | NA | NA | SS | 1:1 $HNO_3$ Baker LOT #: 0000104117 |
| LCS1 | LCS | ASTM Type II $H_2O$ | 27708 | WR-22 | 2000 µl | ↓ | CONC. $HNO_3$ Baker LOT #: 0000104117 |
| MF9M27S | MS | MF9M27 | 24679 24680 | WR-22 | 200 µl | ↓ | 30% $H_2O_2$ Macron LOT #: 0000086427 |
| MF9M27D | MD | MF9M27 | NA | NA | NA | ↓ | CONC. HCl EMD LOT #: 54310 |

BALANCE ID:

102683

(SW) Samples weighed and transferred into 100 mL flat-bottom tubes. (SS) QCs prepared as indicated above. (SW) 10 mL 1:1 $HNO_3$ added to all. Samples covered and placed on hotblock at ~95°C for 10 minutes, removed from heat, and allowed to cool. 5 mL concentrated $HNO_3$ added to all. Samples returned to hotblock for 30 minutes, removed from heat, and allowed to cool. Samples were returned to heat and allowed to reduce to 5 mL. Temperature was checked with thermometer 12207430, which read 95.4 °C. Samples removed from heat. 2 mL ASTM Type II $H_2O$ and 3 mL 30% $H_2O_2$ added, returned to hotblock, and heated until bubbling reaction subsided. Samples removed from heat. An additional 1 mL of $H_2O_2$ was added to all samples and heated until effervesence subsided. Samples removed from heat and allowed to cool. Samples returned to heat and allowed reduce to 5 mL. Samples removed from heat and allowed to cool. 10 mL conc. HCl added. Samples returned to hotblock for 15 minutes, removed from heat, and allowed to cool. Samples diluted to 100 mL final volume with ASTM Type II $H_2O$. Samples inverted several times to mix. Samples transferred to 50 mL tubes for analysis.

## ISM 3050B PHYSICAL DESCRIPTION

| Sample ID | Matrix | Method | Prep Date | Amount Sample Used(g) | Final Sample Volume | PH | Color/Clarity/Texture Before Color | Before Texture | After Color | After Clarity | Init. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PBS2 | ASTM Type II $H_2O$ | 3050B | 06/11/2015 | NA | 100 mL | NA | Colorless | Clear | Colorless | Clear | SW |
| LCS2 | ASTM Type II $H_2O$ | ↓ | ↓ | NA | ↓ | ↓ | Colorless | Clear | Colorless | Clear | ↓ |
| MF9M41 | Soil | ↓ | ↓ | 1.2877 | ↓ | ↓ | Brown | Medium | Yellow | Clear | ↓ |

**PREPARED BY:**
Shane Stewart
Shaina Wiest

**START DATE/TIME:**
06/11/2015 05:37
**END DATE/TIME:**
06/12/2015 08:37
**WORKORDER(S):**
1515559

**SDG:**
MF9M21
**CASE:**
45299
**METHOD/MATRIX:**
3050B/Soil
**BATCH:**
5373
**HBN #:**
150335
**MOD:**
NA

ALS

| QC ID | QC TYPE | MATRIX SOURCE | SPIKE SOURCE | PIPETTE ID | VOLUME SPIKED | INITIALS | Method Reagents |
|---|---|---|---|---|---|---|---|
| PBS2 | PBS | ASTM Type II $H_2O$ | NA | NA | NA | SW | 1:1 $HNO_3$ Baker LOT #: 0000104117 |
| LCS2 | LCS | ASTM Type II $H_2O$ | 27708 | WR-22 | 2000 µl | ↓ | CONC. $HNO_3$ Baker LOT #: 0000104117 |
| NA | MS | NA | NA NA | NA | NA | ↓ | 30% $H_2O_2$ Macron LOT #: 0000086427 |
| NA | MD | NA | NA | NA | NA | ↓ | CONC. HCl EMD LOT #: 54310 |

BALANCE ID:

102683

Samples and QCs prepared by Shaina Wiest and supervised by Shane Stewart. Samples weighed and transferred into 100 mL flat-bottom tubes. QCs prepared as indicated above. 10 mL 1:1 $HNO_3$ added to all. Samples covered and placed on hotblock at ~95°C for 10 minutes, removed from heat, and allowed to cool. 5 mL concentrated $HNO_3$ added to all. Samples returned to hotblock for 30 minutes, removed from heat, and allowed to cool. Samples were returned to heat and allowed to reduce to 5 mL. Temperature was checked with thermometer 12207430, which read 95.2 °C. Samples removed from heat. 2 mL ASTM Type II $H_2O$ and 3 mL 30% $H_2O_2$ added, returned to hotblock, and heated until bubbling reaction subsided. Samples removed from heat. An additional 1 mL of $H_2O_2$ was added to all samples and heated until effervescence subsided. Samples removed from heat and allowed to cool. Samples returned to heat and allowed reduce to 5 mL. Samples removed from heat and allowed to cool. 10 mL conc. HCl added. Samples returned to hotblock for 15 minutes, removed from heat, and allowed to cool. Samples diluted to 100 mL final volume with ASTM Type II $H_2O$. Samples inverted several times to mix. Samples transferred to 50 mL tubes for analysis.

**ISM01.3 3050B PHYSICAL DESCRIPTION**

| Sample ID | Matrix | Method | Prep Date | Amount Sample Used (g) | Final Sample Volume | PH | Color/Clarity/Texture Before Color | Before Texture | After Color | After Clarity | Init. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PBS1 | ASTM Type II $H_2O$ | 3050B | 06/09/15 | 1.0000 | 100 mL | NA | Colorless | 0.00 | Colorless | Clear | KFB |
| LCS1 | ASTM Type II $H_2O$ | | | 1.0000 | 100 mL | | Colorless | 0.00 | Colorless | Clear | |
| MF9M21 | ASTM Type II $H_2O$ | | | 1.2496 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M22 | Soil | | | 1.2177 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M23 | | | | 1.4618 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M24 | | | | 1.3156 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M25 | | | | 1.2869 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M26 | | | | 1.0181 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M27 | | | | 1.4471 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M27S | | | | 1.4463 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M27D | | | | 1.4486 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M28 | | | | 1.1579 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M29 | | | | 1.3999 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M30 | | | | 1.3139 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M31 | | | | 1.1896 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M32 | | | | 1.4459 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M33 | | | | 1.0577 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M34 | | | | 1.2604 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M35 | | | | 1.3327 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M37 | | | | 1.1166 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M38 | | | | 1.1618 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M39 | | | | 1.0851 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M40 | | | | 1.4578 | 100 mL | | Brown | Medium | Colorless | Clear | |
| MF9M41 | | | | 1.3284 | 100 mL | | Brown | Medium | Colorless | Clear | |

**PREPARED BY:**
Kristie Bitner

**START DATE/TIME:**
06/09/15 11:19
**END DATE/TIME:**
06/10/15 17:30
**WORKORDER(S):**
1515559

**ISM01.3**
**SDG: MF9M21**
**CASE: 45299**

**METHOD/MATRIX:**
3050B/Soil
**BATCH:**
EMS / 4139
**HBN #:**
150177

**Balance ID:**
102683

**Mod:**
NA

| QC ID | QC Type | Matrix Source | Spike Source | Pipette ID | Volume Spiked | Initials | Method Reagents | | Pipette ID |
|---|---|---|---|---|---|---|---|---|---|
| PBS1 | PBS | ASTM Type II $H_2O$ | NA | NA | NA | KFB | 1:1 $HNO_3$ LOT #: | MS-15-097, 110 (4184/97, 98) | ICP-10G |
| LCS1 | LCS | ASTM Type II $H_2O$ | 23704 | 2163121 | 1 mL | | CONC. $HNO_3$ LOT #: | BDH: 1214040,1213120 | ICP-10G |
| MF9M27S | MS | MF9M27 | 25853 | 2163121 | 1 mL | | 30% $H_2O_2$ LOT #: | Macron: 0000086427 | NA |
| MF9M27D | MD | MF9M27 | NA | NA | NA | | | | |

06/09/2015 11:19. Rinsed digestion tubes (SCP Science lot # J200373-263), watch glasses and caps with ASTM Type II water. Samples weighed and transferred into digestion tubes by Shane Stewart and Jennifer Wilkinson. PBS and LCS are 1 g. aliquots of ASTM Type II water. Spiked as indicated above, added 10 mL of 1:1 $HNO_3$ to each sample and covered with caps. Time in 08:37 on 06/10/2015. Heated samples to 95°C (±3°), then refluxed for 15 minutes, removed from heat and cooled. Added 5 mL concentrated nitric acid and refluxed for 30 minutes, checking for brown fumes. Exchanged caps for ribbed watch glasses and refluxed for 2 hours. Temperature checked using thermometer 111330864 at 10:37, 92.9 °C. Removed from heat and cooled. Added 2 mL of ASTM Type II water and 3 mL of 30% H2O2, heated with caps on, checking for effervescence. Replaced caps with ribbed watch glasses and continued to heat for 2 hours. Allowed samples to cool and transferred samples to well rinsed 100 mL class A volumetric flasks. Brought samples to volume with ASTM Type II water, stoppered and shook samples to mix. Transferred about 50 mL of samples back to digestion tubes and capped.

# ISM01.3-7471B Hg-Soil: Electronic Physical Description Log

| File Location: ALSltws013\AA_current\Mercury\Hg-EPA-CLP-DATA | | | File Name: PD-HGS-MF9M21-150235 |
|---|---|---|---|
| HBN: 150235 | Case: 45299 | SDG: MF9M21 | Mercury in EPA-CLP soil |
| Workorder ID(s): 1515559 | | | |

| | EPA Sample ID | Matrix | Method ** | Prep Date and Time | Amount of Sample Used (g) | Final Volume of Samples (mL) | pH | Color Before | Texture Before | Color After $NH_2OH \cdot HCl$ | Clarity After $NH_2OH \cdot HCl$ | Init. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Standards | S0 | ASTM Type II $H_2O$ | ISM01.3 7471B | 06/10/2015 10:25 | NA | 100mL + 36mL reagents | NA | Colorless | NA | Colorless | Clear | CRH |
| Calibration Standards | S0.2 | | | | | | | | | | | |
| Calibration Standards | S0.5 | | | | | | | | | | | |
| Calibration Standards | S1.0 | | | | | | | | | | | |
| Calibration Standards | S5.0/CCVs | | | | | | | | | | | |
| Calibration Standards | S10 | | | | | | | | | | | |
| | ICV | | | | | | | Yellow | | | | |
| | ICB/CCBs | | | | | | | Colorless | | | | |
| | PBS1 | | | | | | | Colorless | | | | |
| | MF9M21 | Soil | | | 0.5883 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M22 | | | | 0.5334 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M23 | | | | 0.5750 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M24 | | | | 0.5584 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M25 | | | | 0.5201 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M26 | | | | 0.5430 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M27 | | | | 0.5075 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M27S | | | | 0.5086 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M27D | | | | 0.5090 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M28 | | | | 0.5565 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M29 | | | | 0.5374 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M30 | | | | 0.5482 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M31 | | | | 0.5954 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M32 | | | | 0.5265 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M33 | | | | 0.5689 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M34 | | | | 0.5569 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M35 | | | | 0.5134 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M37 | | | | 0.5144 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M38 | | | | 0.5531 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M39 | | | | 0.5765 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M40 | | | | 0.5044 | | | Brown | Medium | Brown | Cloudy | |
| | MF9M41 | | | | 0.5805 | | | Brown | Medium | Brown | Cloudy | |

**ISM01.3-7471B Mercury Standards Preparation Description**

| Sample ID. | Solution used | Amount | Description of solution | Std. final volume | Std. final conc. |
|---|---|---|---|---|---|
| S0, ICB, CCBs, PBS1 | NA | NA | NA | 100mL sample + 36mL reagents | 0 µg/L Hg |
| S0.2 | Hg STD B (28279) | 200 µL | STD B = 0.1 mg/L Hg | | 0.2 µg/L Hg |
| S0.5 | | 500 µL | | | 0.5 µg/L Hg |
| S1.0 | Hg STD A (28278) | 100 µL | STD A = 1.0 mg/L Hg | | 1.0 µg/L Hg |
| S5.0, CCVs | | 500 µL | | | 5.0 µg/L Hg |
| S10 | | 1000 µL | | | 10 µg/L Hg |
| ICV | ICV5-0508 Hg (21478) | 1000 µL | Hg CLP-ICV = 0.4 mg/L Hg | | 4.0 µg/L Hg |
| MS | Hg STD A (28278) | 250 µL | STD A = 1.0 mg/L Hg | | 2.5 µg/L Hg |
| MD | NA | NA | NA | | NA |

Comments: NONE

# % Moistures & Solids

**Analyst:** IJO
**Queue:** EGRV
**Batch:** 5200
**Instrument:** GRAV03

**Oven Start Time** 06/04/2015 12:00 **Start Oven Temp:** 105° **Start Desiccator:** 06/05/2015 07:30
**Oven Finish Time** 06/05/2015 07:30 **End Oven Temp:** 105° **End Desiccator:** 06/05/2015 08:30

| Workorder | Dish# | Lab Sample ID | Dish (g) | Dish + Soil (g) | Soil Weight (g) | Dish + DS (g) | Dry Soil (g) | % Solids | % Moistures |
|---|---|---|---|---|---|---|---|---|---|
| 1515559 | 1 | 1515559001 | 1.3045 | 9.6325 | 8.3280 | 8.1693 | 6.8648 | 82.4304% | 17.5696% |
| 1515559 | 2 | 1515559002 | 1.3032 | 9.9723 | 8.6691 | 8.9132 | 7.6100 | 87.7830% | 12.2170% |
| 1515559 | 3 | 1515559003 | 1.3106 | 9.8336 | 8.5230 | 8.8263 | 7.5157 | 88.1814% | 11.8186% |
| 1515559 | 4 | 1515559004 | 1.3009 | 9.6707 | 8.3698 | 8.5521 | 7.2512 | 86.6353% | 13.3647% |
| 1515559 | 5 | 1515559005 | 1.3179 | 9.9680 | 8.6501 | 8.5617 | 7.2438 | 83.7424% | 16.2576% |
| 1515559 | 6 | 1515559006 | 1.3077 | 9.6498 | 8.3421 | 8.5430 | 7.2353 | 86.7324% | 13.2676% |
| 1515559 | 7 | 1515559007 | 1.3120 | 9.6857 | 8.3737 | 8.5541 | 7.2421 | 86.4863% | 13.5137% |
| 1515559 | 8 | 450007 | 1.3207 | 9.7945 | 8.4738 | 8.7147 | 7.3940 | 87.2572% | 12.7428% |
| 1515559 | 9 | 1515559010 | 1.3175 | 9.7267 | 8.4092 | 8.5015 | 7.1840 | 85.4302% | 14.5698% |
| 1515559 | 10 | 1515559011 | 1.3114 | 9.4834 | 8.1720 | 8.2626 | 6.9512 | 85.0612% | 14.9388% |
| 1515559 | 11 | 1515559012 | 1.3136 | 9.8607 | 8.5471 | 8.4396 | 7.1260 | 83.3733% | 16.6267% |
| 1515559 | 12 | 1515559013 | 1.3028 | 9.7279 | 8.4251 | 8.4400 | 7.1372 | 84.7135% | 15.2865% |
| 1515559 | 13 | 1515559014 | 1.3308 | 9.5981 | 8.2673 | 8.3008 | 6.9700 | 84.3081% | 15.6919% |
| 1515559 | 14 | 1515559015 | 1.3012 | 9.9927 | 8.6915 | 8.9317 | 7.6305 | 87.7927% | 12.2073% |
| 1515559 | 15 | 1515559016 | 1.3313 | 9.5531 | 8.2218 | 7.9156 | 6.5843 | 80.0834% | 19.9166% |
| 1515559 | 16 | 1515559017 | 1.3269 | 9.5080 | 8.1811 | 7.9777 | 6.6508 | 81.2947% | 18.7053% |
| 1515559 | 17 | 1515559018 | 1.3090 | 9.7268 | 8.4178 | 8.5539 | 7.2449 | 86.0664% | 13.9336% |
| 1515559 | 18 | 1515559019 | 1.3108 | 9.7497 | 8.4389 | 7.9297 | 6.6189 | 78.4332% | 21.5668% |
| 1515559 | 19 | 1515559020 | 1.3130 | 9.7640 | 8.4510 | 8.2348 | 6.9218 | 81.9051% | 18.0949% |
| 1515559 | 20 | 1515559021 | 1.3090 | 9.7066 | 8.3976 | 8.6688 | 7.3598 | 87.6417% | 12.3583% |
| 1515559 | 21 | 1515559022 | 1.3172 | 9.8531 | 8.5359 | 8.6869 | 7.3697 | 86.3377% | 13.6623% |

From: (832) 347-4180
Derrick Cobb
Weston Solutions, Inc
5599 San Felipe St
Ste. 700
HOUSTON, TX 77056

Origin ID: HOUA

FedEx Express

J15121502303uv

Ship Date: 02JUN15
ActWgt: 70.0 LB
CAD: 2557564/INET3610

Dims: 22 X 16 X 14 IN

Delivery Address Bar Code

Ref # 20406.016.005.0919.01
Invoice #
PO #
Dept #

SHIP TO: (801) 266-7700 BILL SENDER

**Meredith Edwards**
**ALS Laboratory Group - Salt Lake**
**960 West Levoy Street**

**Salt Lake City, UT 84123**

MR 6/3/2015 10:07

WED - 03 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7737 3705 5648

**XH BTFA**

84123
UT-US
SLC

537J1/8A0E/EE4B

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

From: (832) 347-4180
Derrick Cobb
Weston Solutions, Inc
5599 San Felipe St
Ste. 700
HOUSTON, TX 77056

Origin ID: HOUA

FedEx Express

J15121502230Uv

Ship Date: 02JUN15
ActWgt: 70.0 LB
CAD: 2557564/INET3610

Dims: 22 X 16 X 14 IN

Delivery Address Bar Code

Ref # 20406.016.005.0919.01
Invoice #
PO #
Dept #

SHIP TO: (801) 266-7700 BILL SENDER

**Meredith Edwards**
**ALS Laboratory Group - Salt Lake**
**960 West Levoy Street**

**Salt Lake City, UT 84123**

MOr 6/3/2015 16:07

WED - 03 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7737 3695 5451

**XH BTFA**

84123
UT-US
SLC

537J1/3A0E/EE4B

**After printing this label:**
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

# SAMPLE TAG INFORMATION SHEET

There are no Sample Tags included with this SDG

Notations concerning the location of the Sample Tags are included in Forms DC-1, DC-2 and in the SDG Administrative Narrative (if it is required).

# Sample Delivery Group (SDG)
# Cover Sheet

SDG Number: MF9M21

☒ ICPAES ☒ ICPMS ☒ HG ☐ CN

Laboratory Name: ALS Laboratory Group (SLC)

Laboratory Code: DATAC

Contract No.: EPW09036

Case No.: 45299

Analysis Price: N/A

SDG Turnaround: 21

Modified Analysis Requested: NO

Program: ISM01.3

Modification Reference No.: N/A

EPA Sample Numbers in SDG (Listed in Numerical Order)

| | | | |
|---|---|---|---|
| 1) MF9M21 | 7) MF9M27 | 13) MF9M33 | 19) MF9M40 |
| 2) MF9M22 | 8) MF9M28 | 14) MF9M34 | 20) MF9M41 |
| 3) MF9M23 | 9) MF9M29 | 15) MF9M35 | 21) |
| 4) MF9M24 | 10) MF9M30 | 16) MF9M37 | 22) |
| 5) MF9M25 | 11) MF9M31 | 17) MF9M38 | 23) |
| 6) MF9M26 | 12) MF9M32 | 18) MF9M39 | 24) |

MF9M21

First Sample in SDG

MF9M41

Last Sample in SDG

06/03/15

First Sample Receipt Date

06/03/15

Last Sample Receipt Date

***Note:*** *There are a maximum of 20 field samples (excluding PE samples) in an SDG. Attach the TR/COC records to this form in alphanumeric order (the order listed above on this form).*

Signature: /S/ Roxanne Olson

Date: 6/4/2015 8:32:05 AM

(/S/ is an electronic signature that complies with 21 CFR Part 11)

# EPA Sample Receipt History

**Client:** U. S. EPA Region 6 **Contract:** EPW09036 **Case:** **45299** **SDG:** **MF9M21** **Mod:** None

**Due to Client:** **Wed, Jun 24, 2015** **TAT:** 21 **Date Reported:** Not Reported **Status:** **CLOSED**

**Workorder Information** **Program:** ISM01.3 **Region:** 6 **EDD Level:** 2b

| Work Order | Received | PR | Fractions |
|---|---|---|---|
| 1515559 | 06/03/15 10:07 AM | No | ICP-AES, ICP-MS, Mercury |

**Sample Information**

| Lab ID | Client ID | Type | Matrix | ICPAES | ICPMS | HG | CN |
|---|---|---|---|---|---|---|---|
| 1515559001 | MF9M21 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559002 | MF9M22 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559003 | MF9M23 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559004 | MF9M24 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559005 | MF9M25 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559006 | MF9M26 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559007 | MF9M27 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559009 | MF9M27D | MD | Soil | X | X | X | ☐ |
| 1515559008 | MF9M27S | MS | Soil | X | X | X | ☐ |
| 1515559010 | MF9M28 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559011 | MF9M29 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559012 | MF9M30 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559013 | MF9M31 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559014 | MF9M32 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559015 | MF9M33 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559016 | MF9M34 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559017 | MF9M35 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559018 | MF9M37 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559019 | MF9M38 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559020 | MF9M39 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559021 | MF9M40 | SAMPLE | Soil[S] | X | X | X | ☐ |
| 1515559022 | MF9M41 | SAMPLE | Soil[S] | X | X | X | ☐ |

**Field Samples:** **20** **MS:** **1** **MSD:** 0 **MD:** **1** **PE:** 0



Report Parameters = SDG:MF9M21 Case:<NULL> Region:<NULL>
Mod:<NULL> Workorder:<NULL> BeginDate:<NULL> EndDate:<NULL>
OpenSummary:No SortBy:Case

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

Requested Analysis: ISM01.3 ICP-AES, Soil; ISM01.3 Mercury, Soil; ISM01.3 ICP-MS, Soil

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 06/02/~~2008~~ 2015 08:15 | MF9M21 | 1515559001 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 2 | 06/02/~~2008~~ 2015 08:20 | MF9M22 | 1515559002 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 3 | 06/02/~~2008~~ 2015 08:25 | MF9M23 | 1515559003 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 4 | 06/02/~~2008~~ 2015 08:30 | MF9M24 | 1515559004 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 5 | 06/02/~~2008~~ 2015 08:55 | MF9M25 | 1515559005 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 6 | 06/02/~~2008~~ 2015 09:00 | MF9M26 | 1515559006 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 7 | 06/02/~~2008~~ 2015 09:05 | MF9M27 | 1515559007 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 8 | 06/02/~~2008~~ 2015 09:05 | MF9M27S | 1515559008 | MS | Soil/Solid/Sediment | A | 1 | A | A | A |
| 9 | 06/02/~~2008~~ 2015 09:05 | MF9M27D | 1515559009 | MD | Soil/Solid/Sediment | A | 1 | A | A | A |
| 10 | 06/02/~~2008~~ 2015 09:10 | MF9M28 | 1515559010 | | Soil/Solid/Sediment | A | 1 | A | A | A |

02-55 OH

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/3/2015 1658 | ESD | Storage |
| R-33-115D IJO | 06/04/15 10:00 | Greg Cavalle | Solid |
| Greg Cavalle | 06/04/15 13:00 | R-33-115D IJO | Storage |
| R-33-115D gmw | 06/09/2015 1045 | Metals Prep gmw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP

Lab Notebook No.: Network

Prepared / Analyzed by: SS

Date / Time: 06/09/2015 1045

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep | 06/11/2015 0945 | ICP Lab SS | analysis |



Wed, 06/03/15 4:56 PM

ALSCOCV2.6

# ALS Environmental

## CHAIN-OF-CUSTODY

Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF

Client: U. S. EPA Region 6 | Account: 8201 | Type: 8ozGWM

Comments:

Preservatives: COOL

Containers: ID(s) | Count

Requested Analysis: ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | ID(s) | Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 06/02/~~2008~~ 2015 09:15 | MF9M29 | 1515559011 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 12 | 06/02/~~2008~~ 2015 09:20 | MF9M30 | 1515559012 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 13 | 06/02/~~2008~~ 2015 09:50 | MF9M31 | 1515559013 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 14 | 06/02/~~2008~~ 2015 09:55 | MF9M32 | 1515559014 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 15 | 06/02/~~2008~~ 2015 10:00 | MF9M33 | 1515559015 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 16 | 06/02/~~2008~~ 2015 11:20 | MF9M34 | 1515559016 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 17 | 06/02/~~2008~~ 2015 11:25 | MF9M35 | 1515559017 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 18 | 06/02/~~2008~~ 2015 13:30 | MF9M37 | 1515559018 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 19 | 06/02/~~2008~~ 2015 13:05 | MF9M38 | 1515559019 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 20 | 06/02/~~2008~~ 2015 13:10 | MF9M39 | 1515559020 | | Soil/Solid/Sediment | A | 1 | A | A | A |

6-23-15 DH

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 6/3/2015 10:58 | ISD | Storage |
| R-33-1 ISD JJO | 06/04/15 10:00 | Blue Quelle | Solid |
| Blue Quelle | 06/04/15 13:00 | R-33-1 ISD JJO | Storage |
| R-33-1 ISD gmw | 06/09/2015 1045 | Metals Prep gmw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP | Lab Notebook No.: Network

Prepared / Analyzed by: SS | Date / Time: 06/09/2015 1045

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep SS | 06/11/2015 0945 | ICP Lab SS | analysis |

# ALS Environmental

## CHAIN-OF-CUSTODY

Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF

Client: U. S. EPA Region 6 | Account: 8201

Comments:

Type: 8ozGWM

Preservatives: COOL

Requested Analysis: ISM01.3 ICP-AES, Soil; ISM01.3 Mercury, Soil; ISM01.3 ICP-MS, Soil

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 06/02/~~2008~~ 2015 13:40 | MF9M40 | 1515559021 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 22 | 06/02/~~2008~~ 2015 13:45 | MF9M41 | 1515559022 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 23 | 0.23 B OH | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/3/2015 11:58 | FED | Storage |
| R-33-1 15D IJO | 06/04/15 10:00 | Alex Orvalle | Solid |
| Alex Orvalle | 06/04/15 13:00 | R-33-1 15D IJO | Storage |
| R-33-1 15D [illegible] | 06/09/2015 1045 | Metals Prep | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP | Lab Notebook No.: Network

Prepared / Analyzed by: SS | Date / Time: 06/09/2015 1045

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep SS ~~[illegible]~~ | SS 06/12/2015 06/11/2015 0945 | ICP Lab SS | analysis |

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 06/02/~~2008~~ 2015 13:40 | MF9M40 | 1515559021 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 22 | 06/02/~~2008~~ 2015 13:45 | MF9M41 | 1515559022 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 23 | 6-23-15 DJ | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 6/3/2015 1058 | FED | Storage |
| R-33-115D IJO | 06/04/15 10:00 | Alex Orvalle | Solid |
| Alex Orvalle | 06/04/15 13:00 | R-33-115D IJO | Storage |
| R-33-115D gmw | 06/09/2015 1045 | Metals Prep | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP

Prepared / Analyzed by: SW

Lab Notebook No.: Network

Date / Time: 06/09/2015 1045

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Metals prep SW | 06/12/2015 08:57 | ICP lab SW | analysis |

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

Requested Analysis: ISM01.3 ICP-AES, Soil; ISM01.3 Mercury, Soil; ISM01.3 ICP-MS, Soil

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 06/02/~~2008~~ 2015 08:15 | MF9M21 | 1515559001 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 2 | 06/02/~~2008~~ 2015 08:20 | MF9M22 | 1515559002 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 3 | 06/02/~~2008~~ 2015 08:25 | MF9M23 | 1515559003 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 4 | 06/02/~~2008~~ 2015 08:30 | MF9M24 | 1515559004 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 5 | 06/02/~~2008~~ 2015 08:55 | MF9M25 | 1515559005 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 6 | 06/02/~~2008~~ 2015 09:00 | MF9M26 | 1515559006 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 7 | 06/02/~~2008~~ 2015 09:05 | MF9M27 | 1515559007 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 8 | 06/02/~~2008~~ 2015 09:05 | MF9M27S | 1515559008 | MS | Soil/Solid/Sediment | A | 1 | A | A | A |
| 9 | 06/02/~~2008~~ 2015 09:05 | MF9M27D | 1515559009 | MD | Soil/Solid/Sediment | A | 1 | A | A | A |
| 10 | 06/02/~~2008~~ 2015 09:10 | MF9M28 | 1515559010 | | Soil/Solid/Sediment | A | 1 | A | A | A |

6-23-15 PH

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/3/2015 1658 | ISD | Prep |
| R-33-1 15D IJO | 06/04/15 10:00 | Greg Orvalle | solid |
| Greg Orvalle | 06/04/15 13:00 | R-33-1 15D IJO | Storage |
| R-33-1 15D gw | 06/09/2015 1045 | Metals Prep gw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP-MS

Lab Notebook No.: HBN 150177

Prepared / Analyzed by: Kristie Bitner

Date / Time: 06/09/2015 11:19

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Kristie Bitner | 06/15/2015 10:00 | ICP-MS Lab KB | Analysis |

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

Requested Analysis: ISM01.3 ICP-AES, Soil; ISM01.3 Mercury, Soil; ISM01.3 ICP-MS, Soil

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 06/02/~~2008~~ 2015 09:15 | MF9M29 | 1515559011 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 12 | 06/02/~~2008~~ 2015 09:20 | MF9M30 | 1515559012 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 13 | 06/02/~~2008~~ 2015 09:50 | MF9M31 | 1515559013 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 14 | 06/02/~~2008~~ 2015 09:55 | MF9M32 | 1515559014 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 15 | 06/02/~~2008~~ 2015 10:00 | MF9M33 | 1515559015 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 16 | 06/02/~~2008~~ 2015 11:20 | MF9M34 | 1515559016 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 17 | 06/02/~~2008~~ 2015 11:25 | MF9M35 | 1515559017 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 18 | 06/02/~~2008~~ 2015 13:30 | MF9M37 | 1515559018 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 19 | 06/02/~~2008~~ 2015 13:05 | MF9M38 | 1515559019 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 20 | 06/02/~~2008~~ 2015 13:10 | MF9M39 | 1515559020 | | Soil/Solid/Sediment | A | 1 | A | A | A |

DH 6-23-15

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/03/2015 11:05 | ISD | Storage |
| R-33-1 ISD IJO | 06/04/15 10:00 | Blue Quality | Solid |
| Blue Quality | 06/04/15 13:00 | R-33-1 ISD IJO | Storage |
| R-33-1 ISD gmw | 06/09/2015 10:45 | Metals Prep gmw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP-MS

Lab Notebook No.: HBW 150177

Prepared / Analyzed by: Kristia Bates

Date / Time: 06/09/2015 11:19

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Kristia Bates | 06/15/2015 10:00 | ICP-MS Lab KB | Analysis |



Wed, 06/03/15 4:56 PM

ALSCOCV2.6

# ALS Environmental
## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF | Requested Analysis |
|---|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM | |
| Comments: | | | Preservatives: COOL | |

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 06/02/~~2008~~ 2015 13:40 | MF9M40 | 1515559021 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 22 | 06/02/~~2008~~ 2015 13:45 | MF9M41 | 1515559022 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 23 | 6-23-15 BH | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 6/3/2015 1658 | FED | Storage |
| R-33-1 15D IJO | 06/04/15 10:00 | Alex Orvalle | Solid |
| Alex Orvalle | 06/04/15 13:00 | R-33-1 15D IJO | Storage |
| R-33-1 15D grind | 06/09/2015 1045 | Metals Prep | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP-MS
Lab Notebook No.: HBN 150177
Prepared / Analyzed by: Kristie Bates
Date / Time: 06/09/2015 11:19

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Kristie Bates | 06/15/2015 10:00 | ICP-MS Lab KB | Analysis |



Wed, 06/03/15 4:56 PM

ALSCOCV2.6

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 06/02/~~2008~~ 2015 13:40 | MF9M40 | 1515559021 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 22 | 06/02/~~2008~~ 2015 13:45 | MF9M41 | 1515559022 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 23 | 6-23-15 | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |

Requested Analysis

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 6/3/2015 11:58 | FED | Storage |
| R-33-1 15D IJO | 06/04/15 10:00 | Alex Orvalle | Solid |
| Alex Orvalle | 06/04/15 13:00 | R-33-1 15D IJO | Storage |
| R-33-1 15D gmm | 06/09/2015 1045 | Metals Prep | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ISM01.3 Hg Soil

Lab Notebook No.: HBN: 150398

Prepared / Analyzed by: CH / CH

Date / Time: 06/10/2015 10:25

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep lab CH | 06/11/2015 09:13 | AA/Rad lab CH | Hg analysis |
| AA/Rad lab CH | 06/12/2015 15:48 | Nonhazardous waste CH | Disposal |
| | | CH 06/12/2015 Disposed | |

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF | Requested Analysis |
|---|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM | |

Comments:

Preservatives: COOL

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 06/02/~~2008~~ 2015 09:15 | MF9M29 | 1515559011 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 12 | 06/02/~~2008~~ 2015 09:20 | MF9M30 | 1515559012 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 13 | 06/02/~~2008~~ 2015 09:50 | MF9M31 | 1515559013 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 14 | 06/02/~~2008~~ 2015 09:55 | MF9M32 | 1515559014 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 15 | 06/02/~~2008~~ 2015 10:00 | MF9M33 | 1515559015 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 16 | 06/02/~~2008~~ 2015 11:20 | MF9M34 | 1515559016 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 17 | 06/02/~~2008~~ 2015 11:25 | MF9M35 | 1515559017 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 18 | 06/02/~~2008~~ 2015 13:30 | MF9M37 | 1515559018 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 19 | 06/02/~~2008~~ 2015 13:05 | MF9M38 | 1515559019 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 20 | 06/02/~~2008~~ 2015 13:10 | MF9M39 | 1515559020 | | Soil/Solid/Sediment | A | 1 | A | A | A |

CH 6-23-15

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/3/2015 10:58 | ISD | Storage |
| R33-115DIJO | 06/04/15 10:00 | Rue Orville | solid |
| Rue Orville | 06/04/15 13:00 | R-33-115DIJO | Storage |
| R-33-1 15D gmw | 06/09/2015 10:45 | Metals Prep gmw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ISM01.3 Hg Soil

Lab Notebook No.: NBN: 150398

Prepared / Analyzed by: CH / CH

Date / Time: 06/10/2015 10:25

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep lab CH | 06/11/2015 09:13 | AA/Rad lab CH | Hg analysis |
| AA/Rad lab CH | 06/12/2015 15:48 | Nonhazardous waste | Disposal |

CH 06/12/2015 Disposed

# ALS Environmental

## CHAIN-OF-CUSTODY

| Project / Job / Task: EPW09036 | Split: | Workorder ID: 1515559 | Level: EPACLP_PDF |
|---|---|---|---|
| Client: U. S. EPA Region 6 | | Account: 8201 | Type: 8ozGWM |

Comments:

Preservatives: COOL

| Item | Collect Date/Time | Sample ID | Lab ID | QC | Matrix | Containers ID(s) | Containers Count | ISM01.3 ICP-AES, Soil | ISM01.3 Mercury, Soil | ISM01.3 ICP-MS, Soil |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 06/02/~~2008~~ 2015 08:15 | MF9M21 | 1515559001 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 2 | 06/02/~~2008~~ 2015 08:20 | MF9M22 | 1515559002 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 3 | 06/02/~~2008~~ 2015 08:25 | MF9M23 | 1515559003 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 4 | 06/02/~~2008~~ 2015 08:30 | MF9M24 | 1515559004 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 5 | 06/02/~~2008~~ 2015 08:55 | MF9M25 | 1515559005 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 6 | 06/02/~~2008~~ 2015 09:00 | MF9M26 | 1515559006 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 7 | 06/02/~~2008~~ 2015 09:05 | MF9M27 | 1515559007 | | Soil/Solid/Sediment | A | 1 | A | A | A |
| 8 | 06/02/~~2008~~ 2015 09:05 | MF9M27S | 1515559008 | MS | Soil/Solid/Sediment | A | 1 | A | A | A |
| 9 | 06/02/~~2008~~ 2015 09:05 | MF9M27D | 1515559009 | MD | Soil/Solid/Sediment | A | 1 | A | A | A |
| 10 | 06/02/~~2008~~ 2015 09:10 | MF9M28 | 1515559010 | | Soil/Solid/Sediment | A | 1 | A | A | A |

6:23 15 pH

### ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| Edwards, Meredith D. | 06/03/2015 10:07 | ALS Sample Receiving | Sample Login |
| Meredith Edwards | 06/3/2015 1059 | ISD | Storage |
| R-33-115D IJO | 06/04/15 10:00 | Sherry Orvalle | Solid |
| Sherry Orvalle | 06/04/15 13:00 | R-33-115D IJO | Storage |
| R-33-115D gmw | 06/09/2015 1045 | Metals Prep gmw | Metals |

### SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ISM01.3 Hg Soil — Lab Notebook No.: HBN: 150398

Prepared / Analyzed by: CH / CH — Date / Time: 06/10/2015 10:25

| Relinquished By: (Signature) | Date / Time | Received By: (Signature) | Reason for Transfer / Storage Location |
|---|---|---|---|
| metals prep lab CH | 06/11/2015 09:13 | AA/Rad lab CH | Hg analysis |
| AA/Rad lab CH | 06/12/2015 15:48 | Nonhazardous waste CH | Disposal |
| | | CH 06/12/2015 Disposed | |

# Batch Worklist

Batch: EIPX/ 5369 Created: 6/9/2015 13:55 Instrument: HBN: 150204

Rule: ISM ICP-AES 3050B Prep Analyst: S. Stewart Status: NA

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 450799 | PBS1 | | | | PBS | 4 | | ISMAESS.4P | 6180 | 12/6/2015 | 6/9/2015 | |
| 2 | 450800 | LCS1 27708 2ml | | | | LCS | 4 | | ISMAESS.4P | 6180 | 12/6/2015 | 6/9/2015 | |
| 3 | 1515559001 | MF9M21 | | | | SAMPLE | 4 | 1515559001-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 4 | 1515559002 | MF9M22 | | | | SAMPLE | 4 | 1515559002-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 5 | 1515559003 | MF9M23 | | | | SAMPLE | 4 | 1515559003-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 6 | 1515559004 | MF9M24 | | | | SAMPLE | 4 | 1515559004-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 7 | 1515559005 | MF9M25 | | | | SAMPLE | 4 | 1515559005-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 8 | 1515559006 | MF9M26 | | | | SAMPLE | 4 | 1515559006-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 9 | 1515559007 | MF9M27 | | | | SAMPLE | 4 | 1515559007-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 10 | 1515559008 | MF9M27S 24679, 24680 0.2ml | | | | MS | 4 | 1515559008-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 11 | 1515559009 | MF9M27D | | | | MD | 4 | 1515559009-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 12 | 1515559010 | MF9M28 | | | | SAMPLE | 4 | 1515559010-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 13 | 1515559011 | MF9M29 | | | | SAMPLE | 4 | 1515559011-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 14 | 1515559012 | MF9M30 | | | | SAMPLE | 4 | 1515559012-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 15 | 1515559013 | MF9M31 | | | | SAMPLE | 4 | 1515559013-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 16 | 1515559014 | MF9M32 | | | | SAMPLE | 4 | 1515559014-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 17 | 1515559015 | MF9M33 | | | | SAMPLE | 4 | 1515559015-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 18 | 1515559016 | MF9M34 | | | | SAMPLE | 4 | 1515559016-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 19 | 1515559017 | MF9M35 | | | | SAMPLE | 4 | 1515559017-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 20 | 1515559018 | MF9M37 | | | | SAMPLE | 4 | 1515559018-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 21 | 1515559019 | MF9M38 | | | | SAMPLE | 4 | 1515559019-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 22 | 1515559020 | MF9M39 | | | | SAMPLE | 4 | 1515559020-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 23 | 1515559021 | MF9M40 | | | | SAMPLE | 4 | 1515559021-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |

# Batch Worklist

Batch: EIPX/ 5373 Created: 6/11/2015 05:28 Instrument: HBN: 150335

Rule: ISM ICP-AES 3050B Prep Analyst: S. Stewart Status: NA

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 451152 | PBS2 | | | | PBS | 4 | | ISMAESS.4P | 6180 | 12/8/2015 | 6/9/2015 | |
| 2 | 451153 | LCS2 | | | | LCS | 4 | | ISMAESS.4P | 6180 | 12/8/2015 | 6/9/2015 | |
| 3 | 1515559022 | MF9M41 | | | | SAMPLE | 4 | 1515559022-A | I13AESS.4P | 5936 | 11/30/2015 | 6/9/2015 | |

# STANDARD REPORT

## Stock Standard - ICP-CLP-CRQL

| ICP-CLP-CRQL | | Description - ISM CRQL Solution |
|---|---|---|
| **Standard:** 27708 | **Created By:** S. Stewart | **Amount:** 125 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 4/10/2015 | **Expires:** 4/10/2016 |
| **MFG Lot:** J2-MEB563030 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** CLP-AES-CRQL-2 | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 20 ug/mL |
| 2 | 7440-36-0 | Antimony | 6 ug/mL |
| 3 | 7440-38-2 | Arsenic | 1 ug/mL |
| 4 | 7440-39-3 | Barium | 20 ug/mL |
| 5 | 7440-41-7 | Beryllium | 0.5 ug/mL |
| 6 | 7440-43-9 | Cadmium | 0.5 ug/mL |
| 7 | 7440-70-2 | Calcium | 500 ug/mL |
| 8 | 7440-47-3 | Chromium | 1 ug/mL |
| 9 | 7440-48-4 | Cobalt | 5 ug/mL |
| 10 | 7440-50-8 | Copper | 2.5 ug/mL |
| 11 | 7439-89-6 | Iron | 10 ug/mL |
| 12 | 7439-92-1 | Lead | 1 ug/mL |
| 13 | 7439-95-4 | Magnesium | 500 ug/mL |
| 14 | 7439-96-5 | Manganese | 1.5 ug/mL |
| 15 | 7440-02-0 | Nickel | 4 ug/mL |
| 16 | 7440-09-7 | Potassium | 500 ug/mL |
| 17 | 7782-49-2 | Selenium | 3.5 ug/mL |
| 18 | 7440-22-4 | Silver | 1 ug/mL |
| 19 | 7440-23-5 | Sodium | 500 ug/mL |
| 20 | 7440-28-0 | Thallium | 2.5 ug/mL |
| 21 | 7440-62-2 | Vanadium | 5 ug/mL |
| 22 | 7440-66-6 | Zinc | 6 ug/mL |

STANDARD REPORT

## Stock Standard - ICP CLP SPK1

| ICP CLP SPK1 | Description - ISM ICP Matrix Spike Soln #1 |
|---|---|

**Standard:** 24679 **Created By:** K. Lockwood **Amount:** 125 mL
**MFG:** Inorganic Ventures **Create Date:** 7/29/2014 **Expires:** 7/1/2015
**MFG Lot:** F2-MEB427123 **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:** CLPP-SPK-1

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 2000 ug/mL |
| 2 | 7440-39-3 | Barium | 2000 ug/mL |
| 3 | 7440-41-7 | Beryllium | 50 ug/mL |
| 4 | 7440-47-3 | Chromium | 200 ug/mL |
| 5 | 7440-48-4 | Cobalt | 500 ug/mL |
| 6 | 7440-50-8 | Copper | 250 ug/mL |
| 7 | 7439-89-6 | Iron | 1000 ug/mL |
| 8 | 7439-96-5 | Manganese | 500 ug/mL |
| 9 | 7440-02-0 | Nickel | 500 ug/mL |
| 10 | 7440-22-4 | Silver | 50 ug/mL |
| 11 | 7440-62-2 | Vanadium | 500 ug/mL |
| 12 | 7440-66-6 | Zinc | 500 ug/mL |

STANDARD REPORT

## Stock Standard - ICP CLP SPK2

| ICP CLP SPK2 | Description - ISM ICP Matrix Spike Soln #2 |
|---|---|

**Standard:** 24680 **Created By:** K. Lockwood **Amount:** 125 mL
**MFG:** Inorganic Ventures **Create Date:** 7/29/2014 **Expires:** 7/1/2015
**MFG Lot:** F2-MEB418039 **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:** CLPP-SPK-5

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-36-0 | Antimony | 100 ug/mL |
| 2 | 7440-38-2 | Arsenic | 40 ug/mL |
| 3 | 7440-43-9 | Cadmium | 50 ug/mL |
| 4 | 7439-92-1 | Lead | 20 ug/mL |
| 5 | 7782-49-2 | Selenium | 50 ug/mL |
| 6 | 7440-28-0 | Thallium | 50 ug/mL |

# Batch Worklist

Batch: EICP/ 4986 Created: 6/19/2015 10:09 Instrument: HBN: 150889

Rule: ISM ICP-AES Analysis Analyst: J. Sanchez Status: WP

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 452619 | S0 | | | | STB | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| | *k15113* | | | | | | | | | | | | |
| 2 | 452620 | SA | | | | STC | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 3 | 452621 | SB | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 4 | 452622 | SC | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 5 | 452623 | SD | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 6 | 452624 | SE | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 7 | 452625 | SF | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 8 | 452626 | S500000 | | | | STD | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 9 | 452627 | ICV1 | | | | ICV | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 10 | 452628 | ICB1 | | | | ICB | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 11 | 452629 | ICSA1 | | | | ICSA | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 12 | 452630 | ICSAB1 | | | | ICSAB | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 13 | 452631 | CCV1 | | | | CCV | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 14 | 452632 | CCB1 | | | | CCB | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 15 | 450799 | PBS1 | 1 grams | 100 mL | | PBS | 4 | | ISMAESS..4 | 6180 | 12/6/2015 | 6/23/2015 | |
| 16 | 450800 | LCS1 | 1 grams | 100 mL | | LCS | 4 | | ISMAESS..4 | 6180 | 12/6/2015 | 6/23/2015 | |
| 17 | 1515559001 | MF9M21 | 1.1255 grams | 100 mL | | SAMPLE | 4 | 1515559001-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 18 | 1515559002 | MF9M22 | 1.266 grams | 100 mL | | SAMPLE | 4 | 1515559002-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 19 | 1515559003 | MF9M23 | 1.1046 grams | 100 mL | | SAMPLE | 4 | 1515559003-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 20 | 1515559004 | MF9M24 | 1.1556 grams | 100 mL | | SAMPLE | 4 | 1515559004-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 21 | 1515559005 | MF9M25 | 1.2142 grams | 100 mL | | SAMPLE | 4 | 1515559005-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 22 | 1515559006 | MF9M26 | 1.358 grams | 100 mL | | SAMPLE | 4 | 1515559006-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 23 | 1515559007 | MF9M27 | 1.3102 grams | 100 mL | | SAMPLE | 4 | 1515559007-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 24 | 1515559008 | MF9M27S | 1.3127 grams | 100 mL | | MS | 4 | 1515559008-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 25 | 1515559009 | MF9M27D | 1.3151 grams | 100 mL | | MD | 4 | 1515559009-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 26 | 452633 | MF9M27L | | | | SD | 4 | | ISMAESW..3 | 5967 | 11/30/2015 | 6/23/2015 | |
| 27 | 1515559010 | MF9M28 | 1.1621 grams | 100 mL | | SAMPLE | 4 | 1515559010-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 28 | 1515559011 | MF9M29 | 1.2979 grams | 100 mL | | SAMPLE | 4 | 1515559011-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |

# Batch Worklist

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 1515559012 | MF9M30 | 1.2514 grams | 100 mL | | SAMPLE | 4 | 1515559012-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 30 | 1515559013 | MF9M31 | 1.3282 grams | 100 mL | | SAMPLE | 4 | 1515559013-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 31 | 1515559014 | MF9M32 | 1.3691 grams | 100 mL | | SAMPLE | 4 | 1515559014-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 32 | 1515559015 | MF9M33 | 1.1003 grams | 100 mL | | SAMPLE | 4 | 1515559015-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 33 | 1515559016 | MF9M34 | 1.3381 grams | 100 mL | | SAMPLE | 4 | 1515559016-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 34 | 1515559017 | MF9M35 | 1.2257 grams | 100 mL | | SAMPLE | 4 | 1515559017-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 35 | 1515559018 | MF9M37 | 1.2502 grams | 100 mL | | SAMPLE | 4 | 1515559018-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 36 | 1515559019 | MF9M38 | 1.1247 grams | 100 mL | | SAMPLE | 4 | 1515559019-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 37 | 1515559020 | MF9M39 | 1.1443 grams | 100 mL | | SAMPLE | 4 | 1515559020-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 38 | 1515559021 | MF9M40 | 1.3847 grams | 100 mL | | SAMPLE | 4 | 1515559021-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 39 | 451152 | PBS2 | 1 grams | 100 mL | | PBS | 4 | | ISMAESS..4 | 6180 | 12/8/2015 | 6/23/2015 | |
| 40 | 451153 | LCS2 | 1 grams | 100 mL | | LCS | 4 | | ISMAESS..4 | 6180 | 12/8/2015 | 6/23/2015 | |
| 41 | 1515559022 | MF9M41 | 1.2877 grams | 100 mL | | SAMPLE | 4 | 1515559022-A | I13AESS..4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 42 | 452634 | CCV2 | | | | CCV | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |
| 43 | 452635 | CCB2 | | | | CCB | 3 | | ISMAESW..3 | 5967 | 12/16/2015 | 6/23/2015 | |

# Batch Worklist

Batch: EMS/ 4139 Created: 6/9/2015 10:36 Instrument: HBN: 150177

Rule: ISM ICP-MS Soil Prep Analyst: J. Wilkinson Status: NA

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 450733 | PBS1 | | | | PBS | 4 | | ISMMSS..4P | 6196 | 12/6/2015 | 6/9/2015 | |
| 2 | 450734 | LCSS1 | | | | LCSS | 4 | | ISMMSS..4P | 6196 | 12/6/2015 | 6/9/2015 | |
| 3 | 1515559001 | MF9M21 | | | | SAMPLE | 4 | 1515559001-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 4 | 1515559002 | MF9M22 | | | | SAMPLE | 4 | 1515559002-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 5 | 1515559003 | MF9M23 | | | | SAMPLE | 4 | 1515559003-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 6 | 1515559004 | MF9M24 | | | | SAMPLE | 4 | 1515559004-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 7 | 1515559005 | MF9M25 | | | | SAMPLE | 4 | 1515559005-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 8 | 1515559006 | MF9M26 | | | | SAMPLE | 4 | 1515559006-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 9 | 1515559007 | MF9M27 | | | | SAMPLE | 4 | 1515559007-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 10 | 1515559008 | MF9M27S | | | | MS | 4 | 1515559008-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 11 | 1515559009 | MF9M27D | | | | MD | 4 | 1515559009-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 12 | 1515559010 | MF9M28 | | | | SAMPLE | 4 | 1515559010-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 13 | 1515559011 | MF9M29 | | | | SAMPLE | 4 | 1515559011-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 14 | 1515559012 | MF9M30 | | | | SAMPLE | 4 | 1515559012-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 15 | 1515559013 | MF9M31 | | | | SAMPLE | 4 | 1515559013-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 16 | 1515559014 | MF9M32 | | | | SAMPLE | 4 | 1515559014-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 17 | 1515559015 | MF9M33 | | | | SAMPLE | 4 | 1515559015-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 18 | 1515559016 | MF9M34 | | | | SAMPLE | 4 | 1515559016-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 19 | 1515559017 | MF9M35 | | | | SAMPLE | 4 | 1515559017-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 20 | 1515559018 | MF9M37 | | | | SAMPLE | 4 | 1515559018-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 21 | 1515559019 | MF9M38 | | | | SAMPLE | 4 | 1515559019-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 22 | 1515559020 | MF9M39 | | | | SAMPLE | 4 | 1515559020-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 23 | 1515559021 | MF9M40 | | | | SAMPLE | 4 | 1515559021-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |
| 24 | 1515559022 | MF9M41 | | | | SAMPLE | 4 | 1515559022-A | I13MSS..4P | 5936 | 11/30/2015 | 6/9/2015 | |

# STANDARD REPORT

## Stock Standard - ISM-MS-LOW

**ISM-MS-LOW** — **Description - ISM01.3 ICP-MS LCS/Low STD**

**Standard:** 23704 **Created By:** K. Bitner **Amount:** 250 mL
**MFG:** Inorganic Ventures **Create Date:** 6/6/2014 **Expires:** 7/1/2015
**MFG Lot:** H2-MEB527135 **Lab Lot:** ALS-54 **Usable:** Yes
**Part ID:** ALS-54

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 20 ug/mL |
| 2 | 7440-36-0 | Antimony | 2 ug/mL |
| 3 | 7440-38-2 | Arsenic | 1 ug/mL |
| 4 | 7440-39-3 | Barium | 10 ug/mL |
| 5 | 7440-41-7 | Beryllium | 1 ug/mL |
| 6 | 7440-43-9 | Cadmium | 1 ug/mL |
| 7 | 7440-70-2 | Calcium | 500 ug/mL |
| 8 | 7440-47-3 | Chromium | 2 ug/mL |
| 9 | 7440-48-4 | Cobalt | 1 ug/mL |
| 10 | 7440-50-8 | Copper | 2 ug/mL |
| 11 | 7439-89-6 | Iron | 200 ug/mL |
| 12 | 7439-92-1 | Lead | 1 ug/mL |
| 13 | 7439-95-4 | Magnesium | 500 ug/mL |
| 14 | 7439-96-5 | Manganese | 1 ug/mL |
| 15 | 7440-02-0 | Nickel | 1 ug/mL |
| 16 | 7440-09-7 | Potassium | 500 ug/mL |
| 17 | 7782-49-2 | Selenium | 5 ug/mL |
| 18 | 7440-22-4 | Silver | 1 ug/mL |
| 19 | 7440-23-5 | Sodium | 500 ug/mL |
| 20 | 7440-28-0 | Thallium | 1 ug/mL |
| 21 | 7440-62-2 | Vanadium | 5 ug/mL |
| 22 | 7440-66-6 | Zinc | 2 ug/mL |

# STANDARD REPORT

## Stock Standard - ICPMS CLP MS

| ICPMS CLP MS | | | Description - ICPMS CLP Matrix Spike |
|---|---|---|---|
| **Standard:** 25853 | **Created By:** K. Bitner | **Amount:** 125 mL | |
| **MFG:** Inorganic Ventures | **Create Date:** 10/29/2014 | **Expires:** 11/1/2015 | |
| **MFG Lot:** H2-MEB552044 | **Lab Lot:** IP-PS-14-045 | **Usable:** Yes | |
| **Part ID:** CLP-MS-SPK-REV1 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 200 ug/mL |
| 2 | 7440-36-0 | Antimony | 10 ug/mL |
| 3 | 7440-38-2 | Arsenic | 4 ug/mL |
| 4 | 7440-39-3 | Barium | 200 ug/mL |
| 5 | 7440-41-7 | Beryllium | 5 ug/mL |
| 6 | 7440-43-9 | Cadmium | 5 ug/mL |
| 7 | 7440-47-3 | Chromium | 20 ug/mL |
| 8 | 7440-48-4 | Cobalt | 50 ug/mL |
| 9 | 7440-50-8 | Copper | 25 ug/mL |
| 10 | 7439-92-1 | Lead | 2 ug/mL |
| 11 | 7439-96-5 | Manganese | 50 ug/mL |
| 12 | 7440-02-0 | Nickel | 50 ug/mL |
| 13 | 7782-49-2 | Selenium | 10 ug/mL |
| 14 | 7440-22-4 | Silver | 5 ug/mL |
| 15 | 7440-28-0 | Thallium | 5 ug/mL |
| 16 | 7440-62-2 | Vanadium | 50 ug/mL |
| 17 | 7440-66-6 | Zinc | 50 ug/mL |

# Batch Worklist

Batch: EMS/ 4150 Created: 6/21/2015 16:09 Instrument: HBN: 150939

Rule: ISM ICP-MS Soil Analysis Analyst: J. Kershisnik Status: WP

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 452740 | S0 | | | | STB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| | *Run # MS215058* | | | | | | | | | | | | |
| 2 | 452741 | S | | | | STC | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 3 | 452742 | S10 | | | | STD | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 4 | 452743 | S50 | | | | STD | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 5 | 452744 | S200 | | | | STD | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 6 | 452745 | S500 | | | | STD | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 7 | 452746 | S2500 | | | | STD | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 8 | 452747 | ICV1 | | | | ICV | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 9 | 452748 | ICB1 | | | | ICB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 10 | 452749 | ICSA1 | | | | ICSA | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 11 | 452750 | ICSAB1 | | | | ICSAB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 12 | 452751 | CCV1 | | | | CCV | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 13 | 452752 | CCB1 | | | | CCB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 14 | 450733 | PBS1 | 1 grams | 100 mL | | PBS | 4 | | ISMMSS...4 | 6196 | 12/6/2015 | 6/23/2015 | |
| 15 | 450734 | LCS1 | 1 grams | 100 mL | | LCSS | 4 | | ISMMSS...4 | 6196 | 12/6/2015 | 6/23/2015 | |
| 16 | 1515559001 | MF9M21 | 1.2496 grams | 100 mL | | SAMPLE | 4 | 1515559001-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 17 | 1515559002 | MF9M22 | 1.2177 grams | 100 mL | | SAMPLE | 4 | 1515559002-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 18 | 1515559003 | MF9M23 | 1.4618 grams | 100 mL | | SAMPLE | 4 | 1515559003-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 19 | 1515559004 | MF9M24 | 1.3156 grams | 100 mL | | SAMPLE | 4 | 1515559004-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 20 | 1515559005 | MF9M25 | 1.2869 grams | 100 mL | | SAMPLE | 4 | 1515559005-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 21 | 1515559006 | MF9M26 | 1.0181 grams | 100 mL | | SAMPLE | 4 | 1515559006-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 22 | 1515559007 | MF9M27 | 1.4471 grams | 100 mL | | SAMPLE | 4 | 1515559007-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 23 | 1515559008 | MF9M27S | 1.4463 grams | 100 mL | | MS | 4 | 1515559008-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 24 | 1515559009 | MF9M27D | 1.4486 grams | 100 mL | | MD | 4 | 1515559009-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 25 | 452753 | MF9M27L | | | | SD | 4 | | ISMMSS...4 | 5073 | 11/30/2015 | 6/23/2015 | |
| 26 | 452754 | CCV2 | | | | CCV | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 27 | 452755 | CCB2 | | | | CCB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 28 | 1515559010 | MF9M28 | 1.1579 grams | 100 mL | | SAMPLE | 4 | 1515559010-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |

# Batch Worklist

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 1515559011 | MF9M29 | 1.3999 grams | 100 mL | | SAMPLE | 4 | 1515559011-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 30 | 1515559012 | MF9M30 | 1.3139 grams | 100 mL | | SAMPLE | 4 | 1515559012-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 31 | 1515559013 | MF9M31 | 1.1896 grams | 100 mL | | SAMPLE | 4 | 1515559013-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 32 | 1515559014 | MF9M32 | 1.4459 grams | 100 mL | | SAMPLE | 4 | 1515559014-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 33 | 1515559015 | MF9M33 | 1.0577 grams | 100 mL | | SAMPLE | 4 | 1515559015-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 34 | 1515559016 | MF9M34 | 1.2604 grams | 100 mL | | SAMPLE | 4 | 1515559016-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 35 | 1515559017 | MF9M35 | 1.3327 grams | 100 mL | | SAMPLE | 4 | 1515559017-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 36 | 1515559018 | MF9M37 | 1.1166 grams | 100 mL | | SAMPLE | 4 | 1515559018-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 37 | 1515559019 | MF9M38 | 1.1618 grams | 100 mL | | SAMPLE | 4 | 1515559019-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 38 | 1515559020 | MF9M39 | 1.0851 grams | 100 mL | | SAMPLE | 4 | 1515559020-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 39 | 1515559021 | MF9M40 | 1.4578 grams | 100 mL | | SAMPLE | 4 | 1515559021-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 40 | 1515559022 | MF9M41 | 1.3284 grams | 100 mL | | SAMPLE | 4 | 1515559022-A | I13MSS...4 | 5936 | 11/30/2015 | 6/23/2015 | |
| 41 | 452756 | CCV2 | | | | CCV | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |
| 42 | 452757 | CCB2 | | | | CCB | 4 | | ISMMSS...4 | 5073 | 12/18/2015 | 6/23/2015 | |

# Batch Worklist

Batch: EHG/ 5875 Created: 6/10/2015 03:23 Instrument: HBN: 150235

Rule: ISM Mercury CS1 Prep Analyst: S. Stewart Status: NA

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 450866 | S0 | | | | STB | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 2 | 450867 | S0.2 | | | | STC | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 3 | 450868 | S0.5 | | | | STD | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 4 | 450869 | S1.0 | | | | STD | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 5 | 450870 | S5.0 | | | | STD | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 6 | 450871 | S10 | | | | STD | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 7 | 450872 | ICV | | | | ICV | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 8 | 450873 | ICB | | | | ICB | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 9 | 450874 | CCV | | | | CCV | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 10 | 450875 | CCB | | | | CCB | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 11 | 450876 | PBS1 | | | | PBS | 4 | | ISMHGS..4P | 6180 | 7/6/2015 | 6/9/2015 | |
| 12 | 1515559001 | MF9M21 | | | | SAMPLE | 4 | 1515559001-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 13 | 1515559002 | MF9M22 | | | | SAMPLE | 4 | 1515559002-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 14 | 1515559003 | MF9M23 | | | | SAMPLE | 4 | 1515559003-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 15 | 1515559004 | MF9M24 | | | | SAMPLE | 4 | 1515559004-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 16 | 1515559005 | MF9M25 | | | | SAMPLE | 4 | 1515559005-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 17 | 1515559006 | MF9M26 | | | | SAMPLE | 4 | 1515559006-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 18 | 1515559007 | MF9M27 | | | | SAMPLE | 4 | 1515559007-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 19 | 1515559008 | MF9M27S | | | | MS | 4 | 1515559008-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 20 | 1515559009 | MF9M27D | | | | MD | 4 | 1515559009-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 21 | 1515559010 | MF9M28 | | | | SAMPLE | 4 | 1515559010-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 22 | 1515559011 | MF9M29 | | | | SAMPLE | 4 | 1515559011-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 23 | 1515559012 | MF9M30 | | | | SAMPLE | 4 | 1515559012-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 24 | 1515559013 | MF9M31 | | | | SAMPLE | 4 | 1515559013-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 25 | 1515559014 | MF9M32 | | | | SAMPLE | 4 | 1515559014-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 26 | 1515559015 | MF9M33 | | | | SAMPLE | 4 | 1515559015-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 27 | 1515559016 | MF9M34 | | | | SAMPLE | 4 | 1515559016-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 28 | 1515559017 | MF9M35 | | | | SAMPLE | 4 | 1515559017-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 29 | 1515559018 | MF9M37 | | | | SAMPLE | 4 | 1515559018-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |



weighed 06/10/2015 05:52 by Shane Stewart

# Batch Worklist

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 1515559019 | MF9M38 | | | | SAMPLE | 4 | 1515559019-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 31 | 1515559020 | MF9M39 | | | | SAMPLE | 4 | 1515559020-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 32 | 1515559021 | MF9M40 | | | | SAMPLE | 4 | 1515559021-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |
| 33 | 1515559022 | MF9M41 | | | | SAMPLE | 4 | 1515559022-A | I13HGS..4P | 5936 | 6/29/2015 | 6/9/2015 | |

## ISM01.3 – Mercury in Soil: Digestion & Analysis:

**Workorder and Sample Information + Prep-Batching Information**

| Workorder ID | HBN | SDG | Case |
|---|---|---|---|
| 1515388 | 150234 | MF9L98 | 45299 |
| 1515559 | 150235 | MF9M21 | ↓ |
| | | | |
| | | | |
| | CH 06/10/2015 | | |
| | | | |

**Preparation Information**

| | |
|---|---|
| Preparer Name: Christopher R Hansen | |
| Prep Start Date: 06/10/2015 | Prep Start Time: 10:25 |

**Method Information**

Sample IDs are verified by matching the laboratory and client sample labels. 0.5g - 0.6g representative sample aliquots are weighed, then transferred into digestion vessels, rinsing each weighing-dish with 5mL ASTM Type II $H_2O$ into the appropriate vessel. Weights are recorded on the batch sheet.

**Balance ID:** 102683/102838 (weighed 06/10/2015 by SS)

10mL of ASTM Type II $H_2O$ is added to digestion vessels for stds and QCs. Mercury Standards and QCs are spiked as indicated below. Hg concentration in standards and samples is based on a final aqueous volume of 100mL.

| Prepared Standard Name | Hg Spike Used | Spiking Volume | Spike ID No. | Pipette Used | [Hg] µg/L |
|---|---|---|---|---|---|
| S0 | NONE | NONE | NONE | NONE | 0 |
| S0.2 | STD B: | 200µL | 28279 | Hg-3 | 0.2 |
| S0.5 | 0.1 µg/mL | 500µL | ↓ | Hg-1A | 0.5 |
| S1.0 | STD A: | 100µL | 28278 | Hg-3 | 1.0 |
| S5.0/CCV | 1.0 µg/mL | 500µL | ↓ | Hg-1A | 5.0 |
| S10.0 | | 1000µL | ↓ | ↓ | 10.0 |
| ICB/CCB/PBS | NONE | NONE | NONE | NONE | 0 |
| ICV | STD:ICV5 -0508 | 1000µL | 21478 | Hg-1A | 4.0 |
| MS | STD A | 250µL | 28278 | ↓ | 0.5 µg/g |
| MD | NONE | Hg target = Parent sample [Hg] | | | |

MS/MD IDs: MF9L98S/MF9L98D ; MF9M27S/MF9M27D

5mL of freshly prepared aqua-regia (3:1 HCl + $HNO_3$) is added to each vessel.

| | | |
|---|---|---|
| HCl | Lot: 54310 | Manufacturer: EMD |
| $HNO_3$ | Lot: 104117 | Manufacturer: J.T. Baker |

Samples, QCs, and standards are digested for two minutes on a hot block set to maintain a representative $H_2O$ temp-blank at 90 ± 3 °C.

| | | | |
|---|---|---|---|
| HB #: 23A | Hood #: 23 | Thermometer ID: 140424727 | |
| On this hotblock: Cals+ds, SDG: MF9L98 | | | |
| Start Time | End Time | Start Temp | End Temp |
| 11:18 | 11:20 | 91.2 °C | 90.3 °C |
| HB #: 23B | Hood #: 23 | Thermometer ID: 140424727 | |
| On this hotblock: SDG: MF9M21 | | | |
| Start Time | End Time | Start Temp | End Temp |
| 11:19 | 11:21 | 90.9 °C | 90.5 °C |

Allow all digestion vessels to cool. Then 50mL ASTM Type II $H_2O$ and 15 mL 5% $KMnO_4$ is added to each vessel. Purple $KMnO_4$ color should persist for 15 minutes. If not then add additional 5% $KMnO_4$ to each vessel. All standards, QCs, and samples must be given equal $KMnO_4$.

| | | | |
|---|---|---|---|
| 5% $KMnO_4$ | Start time: 11:40 | End time: 11:55 | |
| | Reagents Log: AAcurrent\mercury\reagents | | |
| | Entry: 26 | Made: 05/07/2015 | Exp: 05/07/2016 |
| Was additional $KMnO_4$ used? No | | How much? — | |

Samples, QCs, and standards are digested for thirty minutes on a hot block set to maintain a representative $H_2O$ temp-blank at 90 ± 3 °C.

| | | | |
|---|---|---|---|
| HB #: 23A | Hood #: 23 | Thermometer ID: 140424727 | |
| On this hotblock: Cals+ds, SDG: MF9L98 | | | |
| Start Time | End Time | Start Temp | End Temp |
| 12:00 | 12:32 | 90.1 °C | 91.5 °C |
| HB #: 23B | Hood #: 23 | Thermometer ID: 140424727 | |
| On this hotblock: SDG: MF9M21 | | | |
| Start Time | End Time | Start Temp | End Temp |
| 12:01 | 12:33 | 91.6 °C | 90.3 °C |

Allow samples to cool before analysis. 50mL ASTM Type II $H_2O$ is added to each spiked standard and 55mL ASTM Type II $H_2O$ is added to each weighed sample and QC.

| |
|---|
| Physical description: Sample colors, textures, and clarities are recorded with the sample weights. (Colors: violet, white, brown, grey, red, blue, yellow, green, orange, or black) (Textures: coarse, medium, or fine) (Clarities: clear, cloudy, or opaque). |
| Preparation Comments: None CH 06/11/2015 |

**Analysis Information**

| | |
|---|---|
| Analyst Name: Christopher R Hansen | |
| Date Received for Analysis: 06/11/2015 | Time Received: 09:13 |

12% $NH_2OH{\cdot}HCl$ is added just prior to analysis in order to reduce any remaining $KMnO_4$ from the digestion. 6 mL 12% $NH_2OH{\cdot}HCl$ is added to all standards and samples for each 15mL 5% $KMnO_4$ that were used in digestion. Mix standards and samples well by shaking capped vessels. All $KMnO_4$ color should be gone. The final volume of standards and samples is 100 mL sample + 36 mL reagents + additional reagents if required as noted in the preparation info. Because calibration standards receive the same reagents as samples the Hg concentration in all standards, QCs, and samples is calculated from the final aqueous volume of 100mL for analysis regardless of digestion reagents.

| | | | |
|---|---|---|---|
| 12% $NH_2OH{\cdot}HCl$ | Reagents Log: AAcurrent\mercury\reagents | | |
| | Entry: 21 | Made: 03/27/2015 | Exp: 03/27/2016 |

**CVAA Instrument Information**

| | |
|---|---|
| Type: Cold vapor atomic absorption | Wavelength: 253.7 nm |
| Instrument Type: CETAC M-7500 | Lab ID: AACV02 |

**Reagent Information**

| | | | |
|---|---|---|---|
| 10% $SnCl_2$ + 7% HCl | Reagents Log: AAcurrent\mercury\reagents | | |
| | Entry: 23 | Made: 04/15/2015 CH 06/11/2015 | Exp: 04/14/2015 |
| 5% HCl + 5% $HNO_3$ | Reagents Log: AAcurrent\mercury\reagents | | |
| | Entry: 27 | Made: 05/14/2015 | Exp: 05/14/2016 |

**Run Information #1 – SDG:** ~~MF9L98~~ CH 06/11/15 MF9M21

| | | |
|---|---|---|
| Run Date: 06/11/2016 | Start Time: 10:51 | End Time: 11:32 |
| Analysis HBN: 150398 | | Run Data File: CV2-15168 |

**Run Information #2 – SDG:** ~~MF9M21~~ CH 06/11/15 MF9L98

| | | |
|---|---|---|
| Run Date: 06/11/2015 | Start Time: 10:08 | End Time: 10:48 |
| Analysis HBN: 150397 | | Run Data File: CV2-15167 |

**Run Information #3 – SDG:**

| | | |
|---|---|---|
| Run Date: | Start Time: | End Time: |
| Analysis HBN: | | Run Data File: CH 06/11/2015 |

**Dilution Information**

| Sample | Dilution | Pipette(s) | Reason |
|---|---|---|---|
| | | | |
| None | | | |
| | CH 06/11/2015 | | |

**Sample Result Information**

| |
|---|
| Data Conversion: (µg/L result)(dilution factor) = (µg/L final result) |
| QC Control Limits: Calibration $R^2$ 0.995 minimum; Standards ± 30%; ICV,CCV ± 15%; MS ± 25%; Sample/MD-RPD 20% |
| CRQL: 0.1 mg/kg [Hg]<br>MDL: 0.001457 mg/kg [Hg]; Effective 01/15/2015 - 01/15/2016 |
| This log page, prep and analysis batch sheets, and any associated data is scanned and saved as a PDF file named for the analysis HBN and stored in a network folder also named for the analysis HBN. Saved to: \\Alsltws013\DataReview |
| Mercury reagents notebook pages are scanned and saved online to: \\Alsltws013\AAcurrent\Mercury\Reagents |
| ALS SOP: IT-EP-ISM-HG |

**Additional Information**

| |
|---|
| Comments: MD-RPD > ~~120~~ 20% for MF9L98D: Matrix effects CH 06/12/2015 CH 06/11/2015 |

STANDARD REPORT

# Working Standard - Hg B Cal Sol

| *Hg B Cal Sol* | | | Description - Hg B Calibration Solution |
|---|---|---|---|
| **Standard:** 28279 | **Created By:** C. Hansen | | **Amount:** 50 mL |
| **MFG:** CRH | **Create Date:** 06/08/2015 | | **Expires:** 06/15/2015 |
| **MFG Lot:** | **Lab Lot:** HgB 060815-061415 | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-97-6 | Mercury | 0.1 ug/mL |

**Composition**

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 48.5 mL | 11/07/2025 |
| 27803 | HNO3 | Concentrated Nitric Acid | HNO3 (104117) | 1 mL | 04/20/2020 |
| 28276 | Hg Working | Hg CCV/Calibration Working | HgWS 060815 | 0.5 mL | 06/15/2015 |

# STANDARD REPORT

## Working Standard - Hg A Cal Sol

| *Hg A Cal Sol* | | | Description - Hg A Calibration Solution |
|---|---|---|---|
| **Standard:** 28278 | **Created By:** C. Hansen | | **Amount:** 50 mL |
| **MFG:** CRH | **Create Date:** 06/08/2015 | | **Expires:** 06/15/2015 |
| **MFG Lot:** | **Lab Lot:** HgA 060815-061415 | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-97-6 | Mercury | 1 ug/mL |

**Composition**

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 44 mL | 11/07/2025 |
| 27803 | HNO3 | Concentrated Nitric Acid | HNO3 (104117) | 1 mL | 04/20/2020 |
| 28276 | Hg Working | Hg CCV/Calibration Working | HgWS 060815 | 5 mL | 06/15/2015 |

STANDARD REPORT

## Stock Standard - Hg EPA ICV

| *Hg EPA ICV* | | | Description - Hg EPA ICV |
|---|---|---|---|
| **Standard:** 21478 | **Created By:** C. Hansen | **Amount:** 125 mL | |
| **MFG:** EPA Reference Material | **Create Date:** 12/2/2013 | **Expires:** 12/2/2018 | |
| **MFG Lot:** ICV5-0508 Hg | **Lab Lot:** IHg-CLPICV | **Usable:** Yes | |
| **Part ID:** ICV-5-0508 Hg | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-97-6 | Mercury | 400 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - Hg WS Stock

| *Hg WS Stock* | | | Description - Hg CCV/Cal Stock Solution |
|---|---|---|---|
| **Standard:** 26171 | **Created By:** C. Hansen | **Amount:** 125 mL | |
| **MFG:** Inorganic Ventures | **Create Date:** 12/1/2015 | **Expires:** 12/1/2015 | |
| **MFG Lot:** G2-HG02114 | **Lab Lot:** InorganicVenturesHg1000 | **Usable:** Yes | |
| **Part ID:** AAHG1-1 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-97-6 | Mercury | 1000 mg/L |

# STANDARD REPORT

## Constituent

## Working Standard - Hg Working

| Hg Working | Description - Hg CCV/Calibration Working |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 28276 | **Created By:** | C. Hansen | **Amount:** | 50 mL |
| **MFG:** | CRH | **Create Date:** | 06/08/2015 | **Expires:** | 06/15/2015 |
| **MFG Lot:** | | **Lab Lot:** | HgWS 060815 | **Usable:** | Yes |
| **Part ID:** | | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-97-6 | Mercury | 10 ug/mL |

**Composition**

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 48.5 mL | 11/07/2025 |
| 26171 | Hg WS Stock | Hg CCV/Cal Stock Solution | InorganicVenturesHg10 | 0.5 mL | 12/01/2015 |
| 27803 | HNO3 | Concentrated Nitric Acid | HNO3 (104117) | 1 mL | 04/20/2020 |

## STANDARD REPORT

### Constituent

## Solvent Standard - ASTM H2O

| ASTM H2O | | | Description - ASTM Type II Water |
|---|---|---|---|
| **Standard:** 109 | **Created By:** ALS Support (Lims) | | **Amount:** 1000 L |
| **MFG:** DCL In House | **Create Date:** 10/6/2005 | | **Expires:** 11/7/2025 |
| **MFG Lot:** | **Lab Lot:** LAB 109 | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - HNO3

| *HNO3* | | | Description - Concentrated Nitric Acid |
|---|---|---|---|
| **Standard:** 27803 | **Created By:** C. Hansen | | **Amount:** 2 L |
| **MFG:** JT Baker | **Create Date:** 4/20/2015 | | **Expires:** 4/20/2020 |
| **MFG Lot:** 0000104117 | **Lab Lot:** HNO3 (104117) | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

ALS Reagent Report

ID Number: 26 Description: 5% Potassium Permanganate

Analyst: Christopher Hansen

Date Created: 05/07/2015 Expiration Date: 05/07/2016

Pipettes Used:

Balanced Used: 102887

Materials Used, Manufacturer, Lots, Amounts, Final Concentrations if applicable

Crystalline potassium permanganate, low in mercury, ACS 99.0% min.
Alfa Aesar LOT: K15Z046.
100g potassium permanganate crystals were dissolved into 2L ASTM type II water.
Four 2L bottles (8L) were prepared.



: 003117

# Batch Worklist

Batch: EHG/ 5879 Created: 6/11/2015 15:56 Instrument: HBN: 150398

Rule: ISM Mercury Soil Analysis Analyst: C. Hansen Status: WP

Workorder: 1515559 SDG: MF9M21 Case: 45299

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 450866 | S0 | .5 grams | 100 mL | | STB | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 2 | 450867 | S0.2 | .5 grams | 100 mL | | STC | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 3 | 450868 | S0.5 | .5 grams | 100 mL | | STD | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 4 | 450869 | S1.0 | .5 grams | 100 mL | | STD | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 5 | 450870 | S5.0 | .5 grams | 100 mL | | STD | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 6 | 450871 | S10 | .5 grams | 100 mL | | STD | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 7 | 450872 | ICV | .5 grams | 100 mL | | ICV | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 8 | 450873 | ICB | .5 grams | 100 mL | | ICB | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 9 | 450874 | CCV | .5 grams | 100 mL | | CCV | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 10 | 450875 | CCB | .5 grams | 100 mL | | CCB | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 11 | 450876 | PBS1 | .5 grams | 100 mL | | PBS | 4 | | ISMHGS...4 | 6180 | 7/6/2015 | 6/23/2015 | |
| 12 | 1515559001 | MF9M21 | .5883 grams | 100 mL | | SAMPLE | 4 | 1515559001-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 13 | 1515559002 | MF9M22 | .5334 grams | 100 mL | | SAMPLE | 4 | 1515559002-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 14 | 1515559003 | MF9M23 | .575 grams | 100 mL | | SAMPLE | 4 | 1515559003-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 15 | 1515559004 | MF9M24 | .5584 grams | 100 mL | | SAMPLE | 4 | 1515559004-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 16 | 1515559005 | MF9M25 | .5201 grams | 100 mL | | SAMPLE | 4 | 1515559005-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 17 | 1515559006 | MF9M26 | .543 grams | 100 mL | | SAMPLE | 4 | 1515559006-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 18 | 1515559007 | MF9M27 | .5075 grams | 100 mL | | SAMPLE | 4 | 1515559007-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 19 | 1515559008 | MF9M27S | .5086 grams | 100 mL | | MS | 4 | 1515559008-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 20 | 1515559009 | MF9M27D | .509 grams | 100 mL | | MD | 4 | 1515559009-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 21 | 1515559010 | MF9M28 | .5565 grams | 100 mL | | SAMPLE | 4 | 1515559010-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 22 | 1515559011 | MF9M29 | .5374 grams | 100 mL | | SAMPLE | 4 | 1515559011-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 23 | 1515559012 | MF9M30 | .5482 grams | 100 mL | | SAMPLE | 4 | 1515559012-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 24 | 1515559013 | MF9M31 | .5954 grams | 100 mL | | SAMPLE | 4 | 1515559013-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 25 | 1515559014 | MF9M32 | .5265 grams | 100 mL | | SAMPLE | 4 | 1515559014-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 26 | 1515559015 | MF9M33 | .5689 grams | 100 mL | | SAMPLE | 4 | 1515559015-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 27 | 1515559016 | MF9M34 | .5569 grams | 100 mL | | SAMPLE | 4 | 1515559016-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 28 | 1515559017 | MF9M35 | .5134 grams | 100 mL | | SAMPLE | 4 | 1515559017-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 29 | 1515559018 | MF9M37 | .5144 grams | 100 mL | | SAMPLE | 4 | 1515559018-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |

# Batch Worklist

| Pos | Lab ID | Sample ID | Prep Initial | Prep Final | Dust Weight | Type | Mx | Container | Procedure | Mgr | Expire Date | Due Date | Run Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 1515559019 | MF9M38 | .5531 grams | 100 mL | | SAMPLE | 4 | 1515559019-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 31 | 1515559020 | MF9M39 | .5765 grams | 100 mL | | SAMPLE | 4 | 1515559020-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 32 | 1515559021 | MF9M40 | .5044 grams | 100 mL | | SAMPLE | 4 | 1515559021-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |
| 33 | 1515559022 | MF9M41 | .5805 grams | 100 mL | | SAMPLE | 4 | 1515559022-A | I13HGS...4 | 5936 | 6/29/2015 | 6/23/2015 | |

File #: k15113

| WorkOrder# | Sample #'s | Analytes/Matrix | Prep Batch HBN | Prep Date/Time | Prep Method |
|---|---|---|---|---|---|
| 1515559 | MF9M21-35, 37-40 | See Below/Soil | 150204 | 06/09/2015 14:21 | 3050B |
| 1515559 | MF9M41 | See Below/Soil | 150335 | 06/11/2015 05:37 | 3050B |

**Analytes** = Al, Ca, Fe, Mg, Mn, K, Na

**3050B Conversion Factor:** (µg/L from instrument)(Dilution Factor)(0.1 L/1.0 g) = 0.1 µg/g

**CALIBRATION AND QC STANDARDS UTILIZED:**

| | ID # | Book/Page |
|---|---|---|
| S0/ICB/CCB | ICP-15-040, ICP-15-023 | 4535/55, 54 |
| SA | 27276 | Horizon |
| SB | 27475 | Horizon |
| SC | 27476 | Horizon |
| SD | 28122 | Horizon |
| SE/CCV | 27549 | Horizon |
| SF | 28123 | Horizon |
| S500000 | 27551 | Horizon |
| ICV | 27550 | Horizon |
| ICSA | 27474 | Horizon |
| ICSAB | 28265 | Horizon |
| Bubbler Rinse | ICP-15-010 | 4535/54 |
| Internal Standard | ICP-15-033 | 4535/54 |
| Rinse | ICP-15-034 | 4535/54 |

**SDG #** MF9M21
**CASE #** 45299
**Account #** 8201
**Analysis Method:** ISM01.3
**Analysis Date:** 06/12/2015
**Instrument ID:** ICP08
**HBN #** 150889
**Analyst:** Joanna Sanchez

**ANALYSIS PARAMETERS:**
Pump Rate = 27 rpm
RF Power = 1200 W
Auxiliary Gas = 0.5 L/min
Nebulizer Flow = 0.50 L/min
Coolant Gas Flow = 16 L/min
ASXpress Plus = 3.5 mL Loop

**Dilutions:** None were required.

**Pipettes:** ICP-10

**Comments:** No problems during analysis for the requested analytes.
ICSA1 failed for Pb and Ti.
ICSAB1 failed for Ti.

A Serial Dilution was done by combining 2 mL of MF9M27 with 8 mL of ICP-15-040 (4535/55) in a 15 mL tube.

00359

Project No. N/A

TITLE ALS ENVIRONMENTAL - ICP OES INSTRUMENT ANALYSIS RUN LOGBOOK

Book No. 4694

From Page No. 58

| DATE | TIME ON | TIME OFF | TOTAL TIME | METHOD | MATRIX | HBN # (S) | COMMENTS | LOW Sc / Is / HIGH Sc / Is | # OF SAMPLES | RUN# | INIT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/15/2015 | 13:14 | 15:06 | 112 MIN | 6010C | TCLP | 148786 | N/A | 3838 / 488040 | 6 | K15094 | NE |
| 05/16/2015 | 09:34 | 11:25 | 111 MIN | 6010C | TCLP WATER | 148815 | N/A | 3848 / 483930 | 9 | K15095 | NE |
| 05/18/2015 | 15:39 | 17:26 | 107 MIN | 6010C | DS | 148916 | N/A | 3884 / 491020 | 11 | K15096 | NE |
| 05/19/2015 | 15:04 | 16:58 | 114 MIN | 6010C | TCLP WATER | 148970 | N/A | 4301 / 507620 | 6 | K15097 | NE |
| 05/20/2015 | 10:46 | 12:06 | 80 MIN | 6010C | WATER | 148816 | N/A | 4106 / 491950 | 4 | K15098 | NE |
| 05/20/2015 | 14:02 | 15:33 | 91 MIN | 6010C | DS | 149056 | N/A | 4141 / 495600 | 7 | K15099 | NE |
| 05/22/2015 | 09:38 | 11:18 | 100 MIN | 6010C | DS WATER | 149179, 149181 | N/A | 4094 / 436930 | 8 | K15100 | NE |
| 05/22/2015 | 11:37 | 13:36 | 119 MIN | 6010C | WATER | 149182 | N/A | 4064 / 456270 | 2 | K15101 | NE |
| 05/26/2015 | 15:53 | 16:43 | 50 MIN | 6010C | DS | 149346 | N/A | 4113 / 450450 | 1 | K15102 | NE |
| 05/27/2015 | 14:02 | 15:17 | 75 MIN | 6010C | DS | 149412 | N/A | 4231 / 507130 | 6 | K15103 | NE |
| 05/28/2015 | 18:45 | 20:06 | 81 MIN | 6010C | DS | 149518 | N/A | 4290 / 501360 | 5 | K15104 | NE |
| 05/29/2015 | 11:42 | 13:24 | 102 MIN | 6010C | TCLP WATER | 149522 | N/A | 4351 / 505230 | 6 | K15105 | NE |
| 06/01/2015 | 14:07 | 15:04 | 57 MIN | 6010C | DS | 149606 | N/A | 4077 / 492880 | 3 | K15106 | NE |
| 06/04/2015 | 12:37 | 16:20 | 223 MIN | 6010C | WATER TCLP DS | 149826, 149830, 149822 | N/A | 3928 / 515300 | 21 | K15107 | NE |
| 06/05/2015 | 12:26 | 14:00 | 94 min. | ISM01.3 2015 | Soil | 1514325 | MF9L76 | 4240 / 638090 | 12 | K15108 | gcs |
| 06/08/2015 | 10:52 | 12:37 | 105 min. | ISM01.3 2015 | Soil | 1514325 | MF9L76 | 4293 / 650040 | 12 | K15109 | gcs |
| 06/10/2015 | 06:53 | 08:17 | 84 min. | ISM01.3 2015 | Water | 1514838 Mod 1999.4 | MC0BJ2 | 3862 / 561000 | 5 | K15110 | gcs |
| 06/10/2015 | 08:45 | 11:06 | 141 min. | ISM01.3 2015 | Soil | 1515388 | MF9L98 | 3928 / 555700 | 20 | K15111 | gcs |
| 06/11/2015 | 13:11 | 14:43 | 92 MIN | 6010C | WATER | 150345 | N/A | 3789 / 489460 | 3 | K15112 | NE |
| 06/12/2015 | 10:59 | 12:58 | 119 min. | ISM01.3 2015 | Soil | gcs 6/12/15 ~~1515554~~ 1515559 | MF9M21 | 3434 / 466170 | 20 | K15113 | gcs |
| 06/14/2015 | 09:16 | 11:12 | 116 min. | ISM01.3 2015 | Soil | 1515388 | MF9L98 | 3563 / 478120 | 20 | K15114 | gcs |
| 06/14/2015 | 11:26 | 12:38 | 72 min. | ISM01.3 2015 | Soil | 1515562 | MF9M36 | 3562 / 497700 | 5 | K15115 | gcs |
| 06/16/2015 | 09:59 | 11:14 | 75 MIN | 6010C | DS | 150582 | N/A | 3625 / 421520 | 4 | K15116 | NE |
| 06/17/2015 | 15:02 | 16:23 | 81 MIN | 6010C | DS | 150719 | N/A | 3716 / 421100 | 9 | K15117 | NE |

To Page No. ____

Witnessed & Understood by me, | Date | Invented by: | Date

Recorded by:

Project No. NA

TITLE ALS Environmental ICP Solutions/Reagents Logbook

Book No. 4535

From Page No. 53

| Date | ICP Solution # | Solution Type | Primary Solution Horizon ID # | Acid Lots | Expiration Date | Recipe Page | Initials | Comments |
|---|---|---|---|---|---|---|---|---|
| 01/26/2015 | ICP-15-004 | Rinse 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 07/26/2015 | 1 | gcs | 2L made |
| 01/27/2015 | ICP-15-005 | 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 07/27/2015 | 1 | gcs | 1L made |
| 02/09/2015 | ICP-15-006 | Rinse 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/09/2015 | 1 | NE | 2L MADE |
| 02/17/2015 | ICP-15-007 | 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/17/2015 | 1 | NE | 2L SPLIT INTO TWO 1L BOTTLES FOR SO, DILUTENT.. |
| 02/23/2015 | ICP-15-008 | 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/23/2015 | 1 | NE | 2L SPLIT INTO TWO 1L BOTTLES FOR SO, DILUTENT |
| 02/23/2015 | ICP-15-009 | Rinse 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/23/2015 | 1 | NE | 2L BUBBLER RINSE |
| ↓ | ICP-15-010 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 02/23/2015 | ICP-15-011 | ScYIS | Sc-27176; Y-26858 | $HNO_3$-0000088969 HCl-54169 | 08/23/2015 | 1 | NE | 2L MADE |
| ↓ | ICP-15-012 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| ↓ | ICP-15-013 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 02/23/2015 | ICP-15-014 | Rinse 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/23/2015 | 1 | NE | 10L MADE |
| 02/23/2015 | ICP-15-015 | Rinse 5%/5% | N/A | $HNO_3$-0000088969 HCl-54169 | 08/23/2015 | 1 | NE | 10L MADE |
| 03/05/2015 | ICP-15-016 | Rinse 5%/5% | NA | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-017 | Rinse 5%/5% | NA | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-018 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-019 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-020 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-021 | 2% ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-022 | Rinse 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 09/05/2015 | 1 | gcs | 2L made |
| 03/05/2015 | ICP-15-023 | 5%/5% | NA | $HNO_3$-0000088969 HCl-54169 | 09/05/2015 | 1 | gcs | 2L split into 2-1L bottles for SO, Diluent |
| 03/10/2015 | ICP-15-024 | 200.7 Diluent | NA | $HNO_3$-0000099263 HCl-54169 | 09/10/2015 | 1 | gcs | 500mL made |
| 03/13/2015 | ICP-15-025 | ~~ISA~~ NE 03/13/2015 TAS | Zn-26859 | $HNO_3$-0000099263 MeOH-DL599 | 09/13/2015 | 1 | NE | 2L MADE |
| 03/24/2015 | ICP-15-026 | 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 09/24/2015 | 1 | gcs | 500mL made |
| 03/25/2015 | ICP-15-027 | 5%/5% | N/A | $HNO_3$-0000099263 HCl-54169 | 09/25/2015 | 1 | NE | 2L SPLIT INTO 2-1L BOTTLE FOR SO, DILUTENT, ETC... |
| 04/06/2015 | ICP-15-028 | Rinse 2% $HNO_3$ | NA | $HNO_3$-0000099263 | 10/06/2015 | 1 | gcs | 1L made |
| 04/10/2015 | ICP-15-029 | Rinse 5%/5% | NA | $HNO_3$-0000099263 HCl-54169 | 10/10/2015 | 1 | gcs | 2L made |
| 04/10/2015 | ICP-15-030 | Rinse 5%/5% | NA | $HNO_3$-0000099263 HCl-54169 | 10/10/2015 | 1 | gcs | 2L made |
| 04/10/2015 | ICP-15-031 | Rinse 5%/5% | NA | $HNO_3$-0000099263 HCl-54169, 54310 | 10/10/2015 | 1 | gcs | 2L made |
| 04/10/2015 | ICP-15-032 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000099263 HCl-54310 | 10/10/2015 | 1 | gcs | 2L made |
| 04/10/2015 | ICP-15-033 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000099263 HCl-54310 | 10/10/2015 | 1 | gcs | 2L made |
| 04/10/2015 | ICP-15-034 | Rinse 5%/5% | NA | $HNO_3$-0000088969 0000089288 0000104117 HCl-54028 54169 54310 | 10/10/2015 | 1 | gcs | 10L made |
| 04/10/2015 | ICP-15-035 | Rinse 5%/5% | NA | $HNO_3$-0000088969 HCl-54310 0000104117 | 10/10/2015 | 1 | gcs | 10L made |
| 04/10/2015 | ICP-15-036 | Rinse 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 10/10/2015 | 1 | gcs | 10L made |
| 04/23/2015 | ICP-15-037 | 2% $HNO_3$ | NA | $HNO_3$-0000099263 | 10/23/2015 | 1 | gcs | 500mL made |
| 05/05/2015 | ICP-15-038 | 5%/5% | N/A | $HNO_3$-0000099263 HCl-54310 | 11/05/2015 | 1 | NE | 2L SPLIT INTO 2-1L BOTTLES FOR SO, DILUTENT, ETC.. |

To Page No. ____

Witnessed & Understood by me: Joanna C Sandoval

Date: 05/08/2015

Invented by:

Recorded by:

Date: 05/05/2015

Project No. NA

TITLE ALS Environmental ICP Solutions/Reagents Logbook

Book No. 4535

From Page No. 54

| Date | ICP Solution # | Solution Type | Primary Solution Horizon ID # | Acid Lots | Expiration Date | Recipe Page | Initials | Comments |
|---|---|---|---|---|---|---|---|---|
| 05/21/2015 | ICP-15-039 | 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L split into 2-1L Bottles For SO, Dilutent, etc. |
| 05/21/2015 | ICP-15-040 | 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L split into 2-1L Bottles For SO, Dilutent, etc. |
| 05/21/2015 | ICP-15-041 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L made |
| 05/21/2015 | ICP-15-042 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L made |
| 05/21/2015 | ICP-15-043 | ScYIS | Sc-27176, Y-26858 | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L made |
| 05/21/2015 | ICP-15-044 | Rinse 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L made |
| 05/21/2015 | ICP-15-045 | Rinse 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 2L made |
| 05/21/2015 | ICP-15-046 | Rinse 5% / 5% | NA | $HNO_3$-0000099263 HCl-0000088969 54310 | 11/21/2015 | 1 | gcs | 10L made |
| 05/21/2015 | ICP-15-047 | Rinse 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 10L made |
| 05/21/2015 | ICP-15-048 | Rinse 5% / 5% | NA | $HNO_3$-0000088969 HCl-54310 | 11/21/2015 | 1 | gcs | 10L made |
| 05/21/2015 | ICP-15-049 | Rinse 2% $HNO_3$ | NA | $HNO_3$-0000088969 | 11/21/2015 | 1 | gcs | 10L made |

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Witnessed & Understood by me, | Date | Invented by: | Date

Recorded by:

TITLE ALS Environmental ~~DATACHEM LABORATORIES~~ ICP SOLUTION / REAGENTS LOGBOOK

Project No. N/A

Book No. 4535

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gjs 7/25/12

RECIPES

7.5% $HNO_3$ = TRANSFERRED SOME ASTM TYPE II $H_2O$ TO A 2L FLASK. ADD 150ML OF $HNO_3$ TO THE FLASK. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER FLASK, SHAKE TO MIX. USE FOR SO, ICB, CCB AND DILUTANT.

Sc IS = ADDED SOME WATER TO A 2L FLASK. ADD ~~50~~ 100 ML OF $HNO_3$ AND 50 ML OF HCl. ADD 1.2mL OF A 10,000 µg/mL Sc STAND. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER FLASK AND SHAKE WELL.

7.5%/1% RINSE = ADD SOME ASTM TYPE II $H_2O$ TO A 2L FLASK. ADD 150ML OF $HNO_3$ + 20ML OF HCl. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER FLASK AND SHAKE WELL.

2ppm Zn. = ADD SOME ASTM TYPE II $H_2O$ TO A 200ML VOLUMETERIC FLASK. ADD 2mL OF $HNO_3$. SPIKE IN 40ml OF 10,000 µg/mL Zn. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER AND SHAKE WELL. USE FOR TORCH ALIGNMENT.

5%/5% RINSE = ADD SOME ASTM TYPE II $H_2O$ TO A 2L FLASK. ADD 100mL OF $HNO_3$ AND 100mL OF HCl TO THE FLASK. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER FLASK AND SHAKE WELL.

Thermo Torch Alignment Solution = Add some ASTM Type II $H_2O$ to a 250 mL flask. Add 2.5 mL of $HNO_3$, 7.5 µL of MeOH and 50 µL of 10,000 µg/mL Zn. Bring to volume with ASTM Type II $H_2O$, Stopper and shake to mix. 0.03 mL/L MeOH, 2mg/L Zn in 1% $HNO_3$.

ScYIS = ADD SOME WATER TO A 2L FLASK, THEN ADD 100mL OF $HNO_3$ AND 100mL OF HCl TO THE FLASK. SPIKE IN 1.2mL OF Sc STANDARD (10,000 µg/mL) AND 0.5mL OF Y STANDARD (10,000 µg/mL). BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. STOPPER AND SHAKE FLASK.

2% $HNO_3$ = Add some ASTM Type II $H_2O$ to a 2L flask. Add 40mL of $HNO_3$ to the flask. Bring to volume with more ASTM Type II $H_2O$. Stopper flask and shake well. Use for SO, ICB, CCB and Serial Dilutions or use for Rinse.

2% ScYIS = Add some ASTM Type II $H_2O$ to a 2L flask. Add 40mL of $HNO_3$ to the flask. Spike in 1.2mL of 10,000 µg/mL Sc standard and 0.5mL of 10,000 µg/mL Y standard. Bring to volume with more ASTM Type II $H_2O$. Stopper flask and shake well.

1% $HNO_3$/0.5% HCl (200.7 Dilutent) = Add some ASTM Type II $H_2O$ to a 500 mL flask. Add 5.0 mL of $HNO_3$ and 2.5 mL of HCl to the flask. Bring to volume with more ASTM Type II water. Stopper flask and shake well. Use for diluting 200.7 samples.

To Page No. ____

| Witnessed & Understood by me, | Date | Invented by: | Date |
|---|---|---|---|
| | | Recorded by: | |

STANDARD REPORT

## Working Standard - ISM01.3 SA

| ISM01.3 SA | | Description - ISM01.3 SA |
|---|---|---|
| **Standard:** 27276 | **Created By:** J. Sanchez | **Amount:** 1000 mL |
| **MFG:** JCS | **Create Date:** 03/01/2015 | **Expires:** 09/01/2015 |
| **MFG Lot:** | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** ICP-10, ICP-2, ICP-1 | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 200 ug/L |
| 2 | 7440-36-0 | Antimony | 60 ug/L |
| 3 | 7440-38-2 | Arsenic | 10 ug/L |
| 4 | 7440-39-3 | Barium | 200 ug/L |
| 5 | 7440-41-7 | Beryllium | 5 ug/L |
| 6 | 7440-43-9 | Cadmium | 5 ug/L |
| 7 | 7440-70-2 | Calcium | 5000 ug/L |
| 8 | 7440-47-3 | Chromium | 10 ug/L |
| 9 | 7440-48-4 | Cobalt | 50 ug/L |
| 10 | 7440-50-8 | Copper | 25 ug/L |
| 11 | 7439-89-6 | Iron | 100 ug/L |
| 12 | 7439-92-1 | Lead | 10 ug/L |
| 13 | 7439-95-4 | Magnesium | 5000 ug/L |
| 14 | 7439-96-5 | Manganese | 15 ug/L |
| 15 | 7439-98-7 | Molybdenum | 10 ug/L |
| 16 | 7440-02-0 | Nickel | 40 ug/L |
| 17 | 7440-09-7 | Potassium | 5000 ug/L |
| 18 | 7782-49-2 | Selenium | 35 ug/L |
| 19 | 7440-22-4 | Silver | 10 ug/L |
| 20 | 7440-23-5 | Sodium | 5000 ug/L |
| 21 | 7440-28-0 | Thallium | 25 ug/L |
| 22 | 7440-32-6 | Titanium | 25 ug/L |
| 23 | 7440-62-2 | Vanadium | 50 ug/L |
| 24 | 7440-66-6 | Zinc | 60 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 889.65 mL | 11/07/2025 |
| 24961 | ICP-CLP-CRQL | ISM CRQL Solution | ICP-CLP | 10 mL | 09/01/2015 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 50 mL | 12/22/2019 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |
| 27274 | 10x of Mo | 10x of Mo stock | ICP-CLP | 0.1 mL | 09/01/2015 |
| 27275 | 100x of Ti | 100x of Ti stock | ICP-CLP | 0.25 mL | 09/01/2015 |

STANDARD REPORT

## Working Standard - ISM01.3 SB

| ISM01.3 SB | | Description - ISM01.3 Standard B |
|---|---|---|
| **Standard:** 27475 | **Created By:** N. Edwards | **Amount:** 1000 mL |
| **MFG:** NAE | **Create Date:** 03/21/2015 | **Expires:** 07/01/2015 |
| **MFG Lot:** | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** ICP-10, ICP-2, ICP-1 | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 1000 ug/L |
| 2 | 7440-36-0 | Antimony | 200 ug/L |
| 3 | 7440-38-2 | Arsenic | 80 ug/L |
| 4 | 7440-39-3 | Barium | 255 ug/L |
| 5 | 7440-41-7 | Beryllium | 80 ug/L |
| 6 | 7440-43-9 | Cadmium | 80 ug/L |
| 7 | 7440-70-2 | Calcium | 25000 ug/L |
| 8 | 7440-47-3 | Chromium | 200 ug/L |
| 9 | 7440-48-4 | Cobalt | 200 ug/L |
| 10 | 7440-50-8 | Copper | 200 ug/L |
| 11 | 7439-89-6 | Iron | 1000 ug/L |
| 12 | 7439-92-1 | Lead | 200 ug/L |
| 13 | 7439-95-4 | Magnesium | 25000 ug/L |
| 14 | 7439-96-5 | Manganese | 200 ug/L |
| 15 | 7439-98-7 | Molybdenum | 80 ug/L |
| 16 | 7440-02-0 | Nickel | 200 ug/L |
| 17 | 7440-09-7 | Potassium | 25000 ug/L |
| 18 | 7782-49-2 | Selenium | 80 ug/L |
| 19 | 7440-22-4 | Silver | 125 ug/L |
| 20 | 7440-23-5 | Sodium | 25000 ug/L |
| 21 | 7440-28-0 | Thallium | 80 ug/L |
| 22 | 7440-32-6 | Titanium | 80 ug/L |
| 23 | 7440-62-2 | Vanadium | 200 ug/L |
| 24 | 7440-66-6 | Zinc | 200 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 897.16 mL | 11/07/2025 |
| 24656 | STD-2A | ISM01.3 Standard Mix | ICP-CLP | 0.04 mL | 07/01/2015 |
| 24657 | STD-2B | ISM01.3 Standard Mix | ICP-CLP | 0.04 mL | 07/01/2015 |
| 24658 | STD-2C | ISM01.3 Standard Mix | ICP-CLP | 0.04 mL | 07/01/2015 |
| 25303 | STD-1 | ISM01.3 Standard | ICP-CLP | 0.04 mL | 10/01/2015 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 2.5 mL | 10/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 0.125 mL | 08/30/2015 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 50 mL | 12/22/2019 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |
| 27191 | Ba Low Stock | 1,000 ug/mL Ba Stock | SPEX Ba 1,000 ug/mL | 0.055 mL | 08/23/2015 |

# STANDARD REPORT

## Working Standard - ISM01.3 SC

| ISM01.3 SC | | Description - ISM01.3 Standard C |
|---|---|---|
| Standard: 27476 | Created By: N. Edwards | Amount: 1000 mL |
| MFG: NAE | Create Date: 03/21/2015 | Expires: 07/01/2015 |
| MFG Lot: | Lab Lot: ICP-CLP | Usable: Yes |
| Part ID: ICP-2 | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 5000 ug/L |
| 2 | 7440-36-0 | Antimony | 2000 ug/L |
| 3 | 7440-38-2 | Arsenic | 800 ug/L |
| 4 | 7440-39-3 | Barium | 2000 ug/L |
| 5 | 7440-41-7 | Beryllium | 800 ug/L |
| 6 | 7440-43-9 | Cadmium | 800 ug/L |
| 7 | 7440-47-3 | Chromium | 2000 ug/L |
| 8 | 7440-48-4 | Cobalt | 2000 ug/L |
| 9 | 7440-50-8 | Copper | 2000 ug/L |
| 10 | 7439-89-6 | Iron | 5000 ug/L |
| 11 | 7439-92-1 | Lead | 2000 ug/L |
| 12 | 7439-96-5 | Manganese | 2000 ug/L |
| 13 | 7439-98-7 | Molybdenum | 800 ug/L |
| 14 | 7440-02-0 | Nickel | 2000 ug/L |
| 15 | 7782-49-2 | Selenium | 800 ug/L |
| 16 | 7440-22-4 | Silver | 250 ug/L |
| 17 | 7440-28-0 | Thallium | 800 ug/L |
| 18 | 7440-32-6 | Titanium | 800 ug/L |
| 19 | 7440-62-2 | Vanadium | 2000 ug/L |
| 20 | 7440-66-6 | Zinc | 2000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 898.35 mL | 11/07/2025 |
| 24656 | STD-2A | ISM01.3 Standard Mix | ICP-CLP | 0.4 mL | 07/01/2015 |
| 24657 | STD-2B | ISM01.3 Standard Mix | ICP-CLP | 0.4 mL | 07/01/2015 |
| 24658 | STD-2C | ISM01.3 Standard Mix | ICP-CLP | 0.4 mL | 07/01/2015 |
| 25303 | STD-1 | ISM01.3 Standard | ICP-CLP | 0.2 mL | 10/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 0.25 mL | 08/30/2015 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 50 mL | 12/22/2019 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |

# STANDARD REPORT

## Working Standard - ISM01.3 SD

**ISM01.3 SD** — **Description - ISM01.3 Standard D**

**Standard:** 28122 **Created By:** J. Sanchez **Amount:** 500 mL
**MFG:** JCS **Create Date:** 05/21/2015 **Expires:** 07/01/2015
**MFG Lot:** **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:** ICP-10, ICP-2

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-36-0 | Antimony | 5000 ug/L |
| 2 | 7440-38-2 | Arsenic | 2000 ug/L |
| 3 | 7439-98-7 | Molybdenum | 2000 ug/L |
| 4 | 7782-49-2 | Selenium | 2000 ug/L |
| 5 | 7440-32-6 | Titanium | 2000 ug/L |
| 6 | 7440-39-3 | Barium | 5000 ug/L |
| 7 | 7440-62-2 | Vanadium | 5000 ug/L |
| 8 | 7440-41-7 | Beryllium | 2000 ug/L |
| 9 | 7440-43-9 | Cadmium | 2000 ug/L |
| 10 | 7440-48-4 | Cobalt | 5000 ug/L |
| 11 | 7440-47-3 | Chromium | 5000 ug/L |
| 12 | 7440-50-8 | Copper | 5000 ug/L |
| 13 | 7439-96-5 | Manganese | 5000 ug/L |
| 14 | 7440-02-0 | Nickel | 5000 ug/L |
| 15 | 7439-92-1 | Lead | 5000 ug/L |
| 16 | 7440-66-6 | Zinc | 5000 ug/L |
| 17 | 7440-28-0 | Thallium | 2000 ug/L |
| 18 | 7429-90-5 | Aluminum | 50000 ug/L |
| 19 | 7439-89-6 | Iron | 50000 ug/L |
| 20 | 7440-70-2 | Calcium | 125000 ug/L |
| 21 | 7440-09-7 | Potassium | 125000 ug/L |
| 22 | 7439-95-4 | Magnesium | 125000 ug/L |
| 23 | 7440-23-5 | Sodium | 125000 ug/L |
| 24 | 7440-22-4 | Silver | 500 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 441 mL | 11/07/2025 |
| 24656 | STD-2A | ISM01.3 Standard Mix | ICP-CLP | 0.5 mL | 07/01/2015 |
| 24657 | STD-2B | ISM01.3 Standard Mix | ICP-CLP | 0.5 mL | 07/01/2015 |
| 24658 | STD-2C | ISM01.3 Standard Mix | ICP-CLP | 0.5 mL | 07/01/2015 |
| 25303 | STD-1 | ISM01.3 Standard | ICP-CLP | 1 mL | 10/01/2015 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 6.25 mL | 10/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 0.25 mL | 08/30/2015 |
| 27803 | HNO3 | Concentrated Nitric Acid | HNO3 (104117) | 25 mL | 04/20/2020 |
| 28120 | HCl | concentrated hydrochloric acid | HCl (54310) | 25 mL | 01/23/2025 |

STANDARD REPORT

## Working Standard - ISM01.3 SE

| ISM01.3 SE | | Description - ISM01.3 STD E/CCV |
|---|---|---|
| **Standard:** 27549 | **Created By:** N. Edwards | **Amount:** 1000 mL |
| **MFG:** NAE | **Create Date:** 03/29/2015 | **Expires:** 07/01/2015 |
| **MFG Lot:** | **Lab Lot:** NE-032915-1 | **Usable:** Yes |
| **Part ID:** ICP-10, ICP-2 | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-36-0 | Antimony | 25000 ug/L |
| 2 | 7440-38-2 | Arsenic | 10000 ug/L |
| 3 | 7439-98-7 | Molybdenum | 10000 ug/L |
| 4 | 7782-49-2 | Selenium | 10000 ug/L |
| 5 | 7440-32-6 | Titanium | 10000 ug/L |
| 6 | 7440-39-3 | Barium | 25000 ug/L |
| 7 | 7440-62-2 | Vanadium | 25000 ug/L |
| 8 | 7440-41-7 | Beryllium | 10000 ug/L |
| 9 | 7440-43-9 | Cadmium | 10000 ug/L |
| 10 | 7440-48-4 | Cobalt | 25000 ug/L |
| 11 | 7440-47-3 | Chromium | 25000 ug/L |
| 12 | 7440-50-8 | Copper | 25000 ug/L |
| 13 | 7439-96-5 | Manganese | 25000 ug/L |
| 14 | 7440-02-0 | Nickel | 25000 ug/L |
| 15 | 7439-92-1 | Lead | 25000 ug/L |
| 16 | 7440-66-6 | Zinc | 25000 ug/L |
| 17 | 7440-28-0 | Thallium | 10000 ug/L |
| 18 | 7429-90-5 | Aluminum | 250000 ug/L |
| 19 | 7439-89-6 | Iron | 250000 ug/L |
| 20 | 7440-70-2 | Calcium | 250000 ug/L |
| 21 | 7440-09-7 | Potassium | 250000 ug/L |
| 22 | 7439-95-4 | Magnesium | 250000 ug/L |
| 23 | 7440-23-5 | Sodium | 250000 ug/L |
| 24 | 7440-22-4 | Silver | 1000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 824 mL | 11/07/2025 |
| 24656 | STD-2A | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 24657 | STD-2B | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 24658 | STD-2C | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 25303 | STD-1 | ISM01.3 Standard | ICP-CLP | 10 mL | 10/01/2015 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 25 mL | 10/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 1 mL | 08/30/2015 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |
| 27078 | HNO3 | Concentrated Nitric Acid | HNO3 (99263) | 50 mL | 02/16/2020 |

# STANDARD REPORT

## Working Standard - ISM01.3 SF

| ISM01.3 SF | Description - ISM01.3 Standard F |
|---|---|

**Standard:** 28123 **Created By:** J. Sanchez **Amount:** 500 mL
**MFG:** JCS **Create Date:** 05/21/2015 **Expires:** 07/01/2015
**MFG Lot:** **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:** ICP-10, ICP-2

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-36-0 | Antimony | 50000 ug/L |
| 2 | 7440-38-2 | Arsenic | 20000 ug/L |
| 3 | 7439-98-7 | Molybdenum | 20000 ug/L |
| 4 | 7782-49-2 | Selenium | 20000 ug/L |
| 5 | 7440-32-6 | Titanium | 20000 ug/L |
| 6 | 7440-39-3 | Barium | 50000 ug/L |
| 7 | 7440-62-2 | Vanadium | 50000 ug/L |
| 8 | 7440-41-7 | Beryllium | 20000 ug/L |
| 9 | 7440-43-9 | Cadmium | 20000 ug/L |
| 10 | 7440-48-4 | Cobalt | 50000 ug/L |
| 11 | 7440-47-3 | Chromium | 50000 ug/L |
| 12 | 7440-50-8 | Copper | 50000 ug/L |
| 13 | 7439-96-5 | Manganese | 50000 ug/L |
| 14 | 7440-02-0 | Nickel | 50000 ug/L |
| 15 | 7439-92-1 | Lead | 50000 ug/L |
| 16 | 7440-66-6 | Zinc | 50000 ug/L |
| 17 | 7440-28-0 | Thallium | 20000 ug/L |
| 18 | 7440-22-4 | Silver | 2000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 434 mL | 11/07/2025 |
| 24656 | STD-2A | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 24657 | STD-2B | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 24658 | STD-2C | ISM01.3 Standard Mix | ICP-CLP | 5 mL | 07/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 1 mL | 08/30/2015 |
| 27803 | HNO3 | Concentrated Nitric Acid | HNO3 (104117) | 25 mL | 04/20/2020 |
| 28120 | HCl | concentrated hydrochloric acid | HCl (54310) | 25 mL | 01/23/2025 |

# STANDARD REPORT

## Working Standard - S500000

| S500000 | Description - ISM01.3 Standard 500000 |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 27551 | **Created By:** | N. Edwards | **Amount:** | 1000 mL |
| **MFG:** | NAE | **Create Date:** | 03/29/2015 | **Expires:** | 09/29/2015 |
| **MFG Lot:** | | **Lab Lot:** | ICP-CLP | **Usable:** | Yes |
| **Part ID:** | | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 500000 ug/L |
| 2 | 7439-89-6 | Iron | 500000 ug/L |
| 3 | 7440-70-2 | Calcium | 500000 ug/L |
| 4 | 7440-09-7 | Potassium | 500000 ug/L |
| 5 | 7439-95-4 | Magnesium | 500000 ug/L |
| 6 | 7440-23-5 | Sodium | 500000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 830 mL | 11/07/2025 |
| 25303 | STD-1 | ISM01.3 Standard | ICP-CLP | 20 mL | 10/01/2015 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 50 mL | 10/01/2015 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |
| 27078 | HNO3 | Concentrated Nitric Acid | HNO3 (99263) | 50 mL | 02/16/2020 |

STANDARD REPORT

# Working Standard - ISM ICP ICV

## ISM ICP ICV — Description - ISM01.3 ICP ICV

**Standard:** 27550 **Created By:** N. Edwards **Amount:** 500 mL
**MFG:** NAE **Create Date:** 03/29/2015 **Expires:** 09/29/2015
**MFG Lot:** ICV-1(0307) **Lab Lot:** ICV ICP-CLP **Usable:** Yes
**Part ID:** ICP-10

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 2521 ug/L |
| 2 | 7440-36-0 | Antimony | 994 ug/L |
| 3 | 7440-38-2 | Arsenic | 999 ug/L |
| 4 | 7440-39-3 | Barium | 497 ug/L |
| 5 | 7440-41-7 | Beryllium | 495 ug/L |
| 6 | 7440-43-9 | Cadmium | 496 ug/L |
| 7 | 7440-70-2 | Calcium | 10026 ug/L |
| 8 | 7440-47-3 | Chromium | 490 ug/L |
| 9 | 7440-48-4 | Cobalt | 499 ug/L |
| 10 | 7440-50-8 | Copper | 492 ug/L |
| 11 | 7439-89-6 | Iron | 5082 ug/L |
| 12 | 7439-92-1 | Lead | 1002 ug/L |
| 13 | 7439-95-4 | Magnesium | 6074 ug/L |
| 14 | 7439-96-5 | Manganese | 499 ug/L |
| 15 | 7440-02-0 | Nickel | 503 ug/L |
| 16 | 7440-09-7 | Potassium | 10021 ug/L |
| 17 | 7782-49-2 | Selenium | 1029 ug/L |
| 18 | 7440-22-4 | Silver | 501 ug/L |
| 19 | 7440-23-5 | Sodium | 10097 ug/L |
| 20 | 7440-28-0 | Thallium | 1028 ug/L |
| 21 | 7440-62-2 | Vanadium | 501 ug/L |
| 22 | 7440-66-6 | Zinc | 1025 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 400 mL | 11/07/2025 |
| 25735 | CLPICP-ICV1 | CLP-ICP/ICPMS-ICV-1 | ICP-CLP | 50 mL | 10/21/2024 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 25 mL | 02/02/2016 |
| 27078 | HNO3 | Concentrated Nitric Acid | HNO3 (99263) | 25 mL | 02/16/2020 |

# STANDARD REPORT

## Working Standard - ISM01.3 ICSA

| ISM01.3 ICSA | Description - ISM01.3 ICP ICSA |
|---|---|

**Standard:** 27474 **Created By:** N. Edwards **Amount:** 1000 mL
**MFG:** NAE **Create Date:** 03/21/2015 **Expires:** 09/21/2015
**MFG Lot:** ICSA(1211) **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:** Grad Cylinder

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 254900 ug/L |
| 2 | 7440-39-3 | Barium | 6 ug/L |
| 3 | 7440-43-9 | Cadmium | 1 ug/L |
| 4 | 7440-70-2 | Calcium | 244500 ug/L |
| 5 | 7440-47-3 | Chromium | 52 ug/L |
| 6 | 7440-50-8 | Copper | 2 ug/L |
| 7 | 7439-89-6 | Iron | 100700 ug/L |
| 8 | 7439-95-4 | Magnesium | 255400 ug/L |
| 9 | 7439-96-5 | Manganese | 7 ug/L |
| 10 | 7440-02-0 | Nickel | 2 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 800 mL | 11/07/2025 |
| 21455 | CLPICP-ICS-A | CLP-ICP-ICS-Part A | ICP-CLP | 100 mL | 11/27/2023 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 50 mL | 12/22/2019 |
| 26903 | HCl | concentrated hydrochloric acid | HCl(54169) | 50 mL | 02/02/2016 |

# STANDARD REPORT

## Working Standard - ISM ICSAB

**ISM ICSAB** — **Description - ISM01.3 ICSAB**

**Standard:** 28265 | **Created By:** J. Sanchez | **Amount:** 200 mL
**MFG:** JCS | **Create Date:** 06/05/2015 | **Expires:** 12/05/2015
**MFG Lot:** ICSAB-(1211/0710) | **Lab Lot:** ICP-CLP | **Usable:** Yes
**Part ID:** ICP-10

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 246800 ug/L |
| 2 | 7440-39-3 | Barium | 537 ug/L |
| 3 | 7440-43-9 | Cadmium | 972 ug/L |
| 4 | 7440-70-2 | Calcium | 234900 ug/L |
| 5 | 7440-47-3 | Chromium | 542 ug/L |
| 6 | 7440-50-8 | Copper | 511 ug/L |
| 7 | 7439-89-6 | Iron | 99320 ug/L |
| 8 | 7439-95-4 | Magnesium | 248000 ug/L |
| 9 | 7439-96-5 | Manganese | 507 ug/L |
| 10 | 7440-02-0 | Nickel | 954 ug/L |
| 11 | 7440-36-0 | Antimony | 618 ug/L |
| 12 | 7440-38-2 | Arsenic | 104 ug/L |
| 13 | 7440-41-7 | Beryllium | 495 ug/L |
| 14 | 7440-48-4 | Cobalt | 476 ug/L |
| 15 | 7439-92-1 | Lead | 49 ug/L |
| 16 | 7782-49-2 | Selenium | 46 ug/L |
| 17 | 7440-22-4 | Silver | 201 ug/L |
| 18 | 7440-28-0 | Thallium | 108 ug/L |
| 19 | 7440-62-2 | Vanadium | 491 ug/L |
| 20 | 7440-66-6 | Zinc | 952 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 140 mL | 11/07/2025 |
| 21455 | CLPICP-ICS-A | CLP-ICP-ICS-Part A | ICP-CLP | 20 mL | 11/27/2023 |
| 21456 | CLPICP-ICS-B | CLP-ICP-ICS-Part B | ICP-CLP | 20 mL | 11/27/2023 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 10 mL | 12/22/2019 |
| 28120 | HCl | concentrated hydrochloric acid | HCl (54310) | 10 mL | 01/23/2025 |

STANDARD REPORT

## Stock Standard - Y Stock

| *Y Stock* | | Description - 10,000 ug/mL Y Stock |
|---|---|---|
| **Standard:** 26858 | **Created By:** P. Foote | **Amount:** 125 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 1/26/2015 | **Expires:** 1/30/2016 |
| **MFG Lot:** AI15-90YY | **Lab Lot:** SPEX Y 10,000 ug/mL | **Usable:** Yes |
| **Part ID:** PLY2-3Y | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-65-5 | Yttrium | 10000 ug/mL |

# STANDARD REPORT

## Stock Standard - Sc Stock

| Sc Stock | | | Description - 10,000 ug/mL Sc Stock |
|---|---|---|---|
| **Standard:** 27176 | **Created By:** P. Foote | **Amount:** 125 mL | |
| **MFG:** Inorganic Ventures | **Create Date:** 2/20/2015 | **Expires:** 2/23/2016 | |
| **MFG Lot:** G2-SC02113 | **Lab Lot:** IV Sc 10,000 ug/mL | **Usable:** Yes | |
| **Part ID:** CGSC10-1 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-20-2 | Scandium | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPICP-ICS-A

| CLPICP-ICS-A | Description - CLP-ICP-ICS-Part A |
|---|---|

**Standard:** 21455 **Created By:** J. Sanchez **Amount:** 100 mL
**MFG:** QATS Laboratory **Create Date:** 11/27/2013 **Expires:** 11/27/2023
**MFG Lot:** ICSA-1211 **Lab Lot:** ICP-CLP **Usable:** Yes
**Part ID:**

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 2549000 ug/L |
| 2 | 7440-39-3 | Barium | 60 ug/L |
| 3 | 7440-43-9 | Cadmium | 10 ug/L |
| 4 | 7440-70-2 | Calcium | 2445000 ug/L |
| 5 | 7440-47-3 | Chromium | 520 ug/L |
| 6 | 7440-50-8 | Copper | 20 ug/L |
| 7 | 7439-89-6 | Iron | 1007000 ug/L |
| 8 | 7439-95-4 | Magnesium | 2554000 ug/L |
| 9 | 7439-96-5 | Manganese | 70 ug/L |
| 10 | 7440-02-0 | Nickel | 20 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPICP-ICS-B

| CLPICP-ICS-B | | Description - CLP-ICP-ICS-Part B |
|---|---|---|
| **Standard:** 21456 | **Created By:** J. Sanchez | **Amount:** 100 mL |
| **MFG:** QATS Laboratory | **Create Date:** 11/27/2013 | **Expires:** 11/27/2023 |
| **MFG Lot:** ICSB-0710 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | -81000 ug/L |
| 2 | 7440-36-0 | Antimony | 6180 ug/L |
| 3 | 7440-38-2 | Arsenic | 1040 ug/L |
| 4 | 7440-39-3 | Barium | 5310 ug/L |
| 5 | 7440-41-7 | Beryllium | 4950 ug/L |
| 6 | 7440-43-9 | Cadmium | 9710 ug/L |
| 7 | 7440-70-2 | Calcium | -96000 ug/L |
| 8 | 7440-47-3 | Chromium | 4900 ug/L |
| 9 | 7440-48-4 | Cobalt | 4760 ug/L |
| 10 | 7440-50-8 | Copper | 5090 ug/L |
| 11 | 7439-89-6 | Iron | -13800 ug/L |
| 12 | 7439-92-1 | Lead | 490 ug/L |
| 13 | 7439-95-4 | Magnesium | -74000 ug/L |
| 14 | 7439-96-5 | Manganese | 5000 ug/L |
| 15 | 7440-02-0 | Nickel | 9520 ug/L |
| 16 | 7782-49-2 | Selenium | 460 ug/L |
| 17 | 7440-22-4 | Silver | 2010 ug/L |
| 18 | 7440-28-0 | Thallium | 1080 ug/L |
| 19 | 7440-62-2 | Vanadium | 4910 ug/L |
| 20 | 7440-66-6 | Zinc | 9520 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - STD-2A

| STD-2A | | Description - ISM01.3 Standard Mix |
|---|---|---|
| **Standard:** 24656 | **Created By:** N. Edwards | **Amount:** 250 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 6/17/2014 | **Expires:** 7/1/2015 |
| **MFG Lot:** G2-MEB487014 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** ALSUT-STD-2A | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-36-0 | Antimony | 5000 ug/mL |
| 2 | 7440-38-2 | Arsenic | 2000 ug/mL |
| 3 | 7439-98-7 | Molybdenum | 2000 ug/mL |
| 4 | 7782-49-2 | Selenium | 2000 ug/mL |
| 5 | 7440-32-6 | Titanium | 2000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - STD-2B

| STD-2B | | Description - ISM01.3 Standard Mix |
|---|---|---|
| **Standard:** 24657 | **Created By:** N. Edwards | **Amount:** 250 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 6/17/2014 | **Expires:** 7/1/2015 |
| **MFG Lot:** H2-MEB529087 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** ALSUT-STD-2B | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-39-3 | Barium | 5000 ug/mL |
| 2 | 7440-62-2 | Vanadium | 5000 ug/mL |
| 3 | 7440-41-7 | Beryllium | 2000 ug/mL |
| 4 | 7440-43-9 | Cadmium | 2000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - STD-2C

| STD-2C | | | Description - ISM01.3 Standard Mix |
|---|---|---|---|
| **Standard:** 24658 | **Created By:** N. Edwards | **Amount:** 250 mL | |
| **MFG:** Inorganic Ventures | **Create Date:** 6/17/2014 | **Expires:** 7/1/2015 | |
| **MFG Lot:** H2-MEB529088 | **Lab Lot:** ICP-CLP | **Usable:** Yes | |
| **Part ID:** ALSUT-STD-2C | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-48-4 | Cobalt | 5000 ug/mL |
| 2 | 7440-47-3 | Chromium | 5000 ug/mL |
| 3 | 7440-50-8 | Copper | 5000 ug/mL |
| 4 | 7439-96-5 | Manganese | 5000 ug/mL |
| 5 | 7440-02-0 | Nickel | 5000 ug/mL |
| 6 | 7439-92-1 | Lead | 5000 ug/mL |
| 7 | 7440-66-6 | Zinc | 5000 ug/mL |
| 8 | 7440-28-0 | Thallium | 2000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - ICP-CLP-CRQL

| ICP-CLP-CRQL | | | Description - ISM CRQL Solution |
|---|---|---|---|
| **Standard:** 24961 | **Created By:** S. Stewart | **Amount:** 250 mL | |
| **MFG:** Inorganic Ventures | **Create Date:** 8/22/2014 | **Expires:** 9/1/2015 | |
| **MFG Lot:** F2-MEB445010 | **Lab Lot:** ICP-CLP | **Usable:** No | |
| **Part ID:** CLP-AES-CRQL-2 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 20 ug/mL |
| 2 | 7440-36-0 | Antimony | 6 ug/mL |
| 3 | 7440-38-2 | Arsenic | 1 ug/mL |
| 4 | 7440-39-3 | Barium | 20 ug/mL |
| 5 | 7440-41-7 | Beryllium | 0.5 ug/mL |
| 6 | 7440-43-9 | Cadmium | 0.5 ug/mL |
| 7 | 7440-70-2 | Calcium | 500 ug/mL |
| 8 | 7440-47-3 | Chromium | 1 ug/mL |
| 9 | 7440-48-4 | Cobalt | 5 ug/mL |
| 10 | 7440-50-8 | Copper | 2.5 ug/mL |
| 11 | 7439-89-6 | Iron | 10 ug/mL |
| 12 | 7439-92-1 | Lead | 1 ug/mL |
| 13 | 7439-95-4 | Magnesium | 500 ug/mL |
| 14 | 7439-96-5 | Manganese | 1.5 ug/mL |
| 15 | 7440-02-0 | Nickel | 4 ug/mL |
| 16 | 7440-09-7 | Potassium | 500 ug/mL |
| 17 | 7782-49-2 | Selenium | 3.5 ug/mL |
| 18 | 7440-22-4 | Silver | 1 ug/mL |
| 19 | 7440-23-5 | Sodium | 500 ug/mL |
| 20 | 7440-28-0 | Thallium | 2.5 ug/mL |
| 21 | 7440-62-2 | Vanadium | 5 ug/mL |
| 22 | 7440-66-6 | Zinc | 6 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - STD-1

| STD-1 | Description - ISM01.3 Standard |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 25303 | **Created By:** | J. Sanchez | **Amount:** | 250 mL |
| **MFG:** | Inorganic Ventures | **Create Date:** | 9/22/2014 | **Expires:** | 10/1/2015 |
| **MFG Lot:** | H2-MEB542124 | **Lab Lot:** | ICP-CLP | **Usable:** | Yes |
| **Part ID:** | ALSUT-STD-1 | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 25000 ug/mL |
| 2 | 7439-89-6 | Iron | 25000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - IV-STOCK-2

| IV-STOCK-2 | | Description - ISM01.3 Standard |
|---|---|---|
| **Standard:** 25304 | **Created By:** J. Sanchez | **Amount:** 500 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 9/22/2014 | **Expires:** 10/1/2015 |
| **MFG Lot:** G2-MEB506019 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** P1081H | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-70-2 | Calcium | 10000 ug/mL |
| 2 | 7440-09-7 | Potassium | 10000 ug/mL |
| 3 | 7439-95-4 | Magnesium | 10000 ug/mL |
| 4 | 7440-23-5 | Sodium | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - Ag Stock

| Ag Stock | Description - 1,000 ug/mL Ag Stock |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 25320 | **Created By:** | P. Foote | **Amount:** | 125 mL |
| **MFG:** | Spex CertiPrep | **Create Date:** | 9/2/2014 | **Expires:** | 8/30/2015 |
| **MFG Lot:** | 19-13AGY | **Lab Lot:** | Ag 1,000 ug/mL | **Usable:** | Yes |
| **Part ID:** | PLAG2-2Y | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-22-4 | Silver | 1000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPICP-ICV1

| CLPICP-ICV1 | | Description - CLP-ICP/ICPMS-ICV-1 |
|---|---|---|
| **Standard:** 25735 | **Created By:** J. Sanchez | **Amount:** 100 mL |
| **MFG:** QATS Laboratory | **Create Date:** 10/21/2014 | **Expires:** 10/21/2024 |
| **MFG Lot:** ICV1-0307 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 25210 ug/L |
| 2 | 7440-36-0 | Antimony | 9940 ug/L |
| 3 | 7440-38-2 | Arsenic | 9990 ug/L |
| 4 | 7440-39-3 | Barium | 4970 ug/L |
| 5 | 7440-41-7 | Beryllium | 4950 ug/L |
| 6 | 7440-43-9 | Cadmium | 4960 ug/L |
| 7 | 7440-70-2 | Calcium | 100260 ug/L |
| 8 | 7440-47-3 | Chromium | 4900 ug/L |
| 9 | 7440-48-4 | Cobalt | 4990 ug/L |
| 10 | 7440-50-8 | Copper | 4920 ug/L |
| 11 | 7439-89-6 | Iron | 50820 ug/L |
| 12 | 7439-92-1 | Lead | 10020 ug/L |
| 13 | 7439-95-4 | Magnesium | 60740 ug/L |
| 14 | 7439-96-5 | Manganese | 4990 ug/L |
| 15 | 7440-02-0 | Nickel | 5030 ug/L |
| 16 | 7440-09-7 | Potassium | 100210 ug/L |
| 17 | 7782-49-2 | Selenium | 10290 ug/L |
| 18 | 7440-22-4 | Silver | 5010 ug/L |
| 19 | 7440-23-5 | Sodium | 100970 ug/L |
| 20 | 7440-28-0 | Thallium | 10280 ug/L |
| 21 | 7440-62-2 | Vanadium | 5010 ug/L |
| 22 | 7440-66-6 | Zinc | 10250 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - Ti Stock

| Ti Stock | Description - 10,000 ug/mL Ti Stock |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 26855 | **Created By:** | P. Foote | **Amount:** | 125 mL |
| **MFG:** | SPEX CertiPrep | **Create Date:** | 1/26/2015 | **Expires:** | 1/30/2016 |
| **MFG Lot:** | AN15-189TIY | **Lab Lot:** | SPEX Ti 10,000 ug/mL | **Usable:** | Yes |
| **Part ID:** | PLTI9-3Y | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-32-6 | Titanium | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - Ba Low Stock

| *Ba Low Stock* | | | Description - 1,000 ug/mL Ba Stock |
|---|---|---|---|
| **Standard:** 27191 | **Created By:** P. Foote | | **Amount:** 30 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 2/23/2015 | | **Expires:** 8/23/2015 |
| **MFG Lot:** 20-183BAM | **Lab Lot:** SPEX Ba 1,000 ug/mL | | **Usable:** Yes |
| **Part ID:** PLBA2-2M | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-39-3 | Barium | 1000 ug/mL |

## STANDARD REPORT

### Constituent

## Stock Standard - Mo Low Stock

| *Mo Low Stock* | | | Description - 1,000 ug/mL Mo Stock |
|---|---|---|---|
| **Standard:** 27204 | **Created By:** P. Foote | | **Amount:** 30 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 2/23/2015 | | **Expires:** 2/28/2016 |
| **MFG Lot:** 20-92MOM | **Lab Lot:** SPEX Mo 1,000 ug/mL | | **Usable:** Yes |
| **Part ID:** PLMO9-2M | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-98-7 | Molybdenum | 1000 ug/mL |

# STANDARD REPORT

## Constituent

## Working Standard - 10x of Mo

| 10x of Mo | Description - 10x of Mo stock |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 27274 | **Created By:** | J. Sanchez | **Amount:** | 10 mL |
| **MFG:** | JCS | **Create Date:** | 03/01/2015 | **Expires:** | 09/01/2015 |
| **MFG Lot:** | | **Lab Lot:** | ICP-CLP | **Usable:** | Yes |
| **Part ID:** | ICP-10, ICP-2 | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-98-7 | Molybdenum | 100000 ug/L |

**Composition**

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 8.8 mL | 11/07/2025 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 0.2 mL | 12/22/2019 |
| 27204 | Mo Low Stock | 1,000 ug/mL Mo Stock | SPEX Mo 1,000 ug/mL | 1 mL | 02/28/2016 |

# STANDARD REPORT

## Constituent

## Working Standard - 100x of Ti

| *100x of Ti* | | | Description - 100x of Ti stock |
|---|---|---|---|
| **Standard:** 27275 | **Created By:** J. Sanchez | **Amount:** 10 mL | |
| **MFG:** JCS | **Create Date:** 03/01/2015 | **Expires:** 09/01/2015 | |
| **MFG Lot:** | **Lab Lot:** ICP-CLP | **Usable:** Yes | |
| **Part ID:** ICP-10, ICP-1 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-32-6 | Titanium | 100000 ug/L |

**Composition**

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 109 | ASTM H2O | ASTM Type II Water | LAB 109 | 9.7 mL | 11/07/2025 |
| 26531 | HNO3 | Concentrated Nitric Acid | HNO3 (88969) | 0.2 mL | 12/22/2019 |
| 26855 | Ti Stock | 10,000 ug/mL Ti Stock | SPEX Ti 10,000 ug/mL | 0.1 mL | 01/30/2016 |

## STANDARD REPORT

### Constituent

## Solvent Standard - ASTM H2O

| ASTM H2O | | | Description - ASTM Type II Water |
|---|---|---|---|
| Standard: 109 | Created By: ALS Support (Lims) | Amount: 1000 L | |
| MFG: DCL In House | Create Date: 10/6/2005 | Expires: 11/7/2025 | |
| MFG Lot: | Lab Lot: LAB 109 | Usable: Yes | |
| Part ID: | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - HNO3

| HNO3 | | | Description - Concentrated Nitric Acid |
|---|---|---|---|
| Standard: 26531 | Created By: C. Hansen | Amount: 2 L | |
| MFG: JT Baker | Create Date: 12/22/2014 | Expires: 12/22/2019 | |
| MFG Lot: 0000088969 | Lab Lot: HNO3 (88969) | Usable: Yes | |
| Part ID: | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

# STANDARD REPORT

## Constituent

## Solvent Standard - HCl

| HCl | Description - concentrated hydrochloric acid |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 26903 | **Created By:** | S. Stewart | **Amount:** | 2 L |
| **MFG:** | EMD | **Create Date:** | 2/2/2015 | **Expires:** | 2/2/2016 |
| **MFG Lot:** | 54169 | **Lab Lot:** | HCl(54169) | **Usable:** | Yes |
| **Part ID:** | | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - HNO3

| HNO3 | | | Description - Concentrated Nitric Acid |
|---|---|---|---|
| **Standard:** 27078 | **Created By:** C. Hansen | | **Amount:** 2 L |
| **MFG:** JT Baker | **Create Date:** 2/16/2015 | | **Expires:** 2/16/2020 |
| **MFG Lot:** 0000099263 | **Lab Lot:** HNO3 (99263) | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - HNO3

| HNO3 | | | Description - Concentrated Nitric Acid |
|---|---|---|---|
| **Standard:** 27803 | **Created By:** C. Hansen | | **Amount:** 2 L |
| **MFG:** JT Baker | **Create Date:** 4/20/2015 | | **Expires:** 4/20/2020 |
| **MFG Lot:** 0000104117 | **Lab Lot:** HNO3 (104117) | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - HCl

| HCl | Description - concentrated hydrochloric acid |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 28120 | **Created By:** | J. Sanchez | **Amount:** | 2 L |
| **MFG:** | EMD | **Create Date:** | 1/23/2015 | **Expires:** | 1/23/2025 |
| **MFG Lot:** | 54310 | **Lab Lot:** | HCl (54310) | **Usable:** | Yes |
| **Part ID:** | | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

ICP-MS ISM01.3 Soil

Run # MS215058

| Workorder ID | Sample #'s | Analytes | Prep Batch/HBN # | Prep Date/Time | Analysis Batch/HBN # | Account # |
|---|---|---|---|---|---|---|
| 1515559 | MF9M21-35, 37-41 | See Below #1 (Soil) | EMS/4139 150177 | 06/09/2015 11:19 | EMS/4150 150939 | 8201 |
| 1515392 | MF9M15, 20 | See Below #1 (Soil) | EMS/4141 150251 | 06/10/2015 10:18 | EMS/4151 150940 | 8201 |
| 1515633 | MF9M69-79 | See Below #1 (Soil) | EMS/4141 150251 | 06/10/2015 10:18 | EMS/4151 150940 | 8201 |

#1 = 9Be, 51V, 52Cr, 59Co, 60Ni, 63Cu, 66Zn, 75As, 82Se, 107Ag, 111Cd, 121Sb, 137Ba, 205Tl, 208Pb

**Soil Conversion Factor :** (ug/L)(0.1 L/1.0 g or sample wt.)(5x dil.)= 0.5 ug/g sample weight

**CALIBRATION AND QC STANDARDS UTILIZED:**

| | ID # | Book/Page |
|---|---|---|
| S0 ICB/CCB (1% $HNO_3$) | MS-15-098 | 4184/97 |
| S | 1000X of 23704 | Horizon |
| S10 | 5X of 28396 | Horizon |
| S50 | 28396 | Horizon |
| S200 | 28397 | Horizon |
| S500 | 28398 | Horizon |
| S2500 | 28399 | Horizon |
| S5000 | 28400 | Horizon |
| S50000 | 2X of 28401 | Horizon |
| S100000 | 28401 | Horizon |
| ICV | 28402 | Horizon |
| ICSA | 28403 | Horizon |
| ICSAB | 28404 | Horizon |
| CCV | 28405 | Horizon |
| Internal Standards | MS-15-067 (#24864) | 4184/96 |
| Rinse | MS-15-109 | 4184/98 |

**SDG:** MF9M21
**SDG:** MF9M15
**CASE:** 45299
**Prep Method:** 3050B
**Analysis Method:** ISM01.3
**Analysis Date:** 06/17/2015
**Instrument ID:** ICPM02
**Results File:** MS215058
**Analyst:** John Kershisnik

**Scanning Mode:** Peak Jumping
**Sweeps:** 40
**Channels per Mass:** 1
**Acquisition Duration:** 36287
**Channel Spacing:** 0.02
**Replicates:** 5

Instrument Parameters:

| Major | | Minor | | Global | |
|---|---|---|---|---|---|
| Extraction: | -149 | Lens 2: | -27.5 | Standard Resolution: | 125 |
| Lens 1: | 4.7 | Lens 3: | -115.3 | High Resolution: | 125 |
| Focus: | 24.9 | Forward Power: | 1404 | Analogue Detector: | 1922 |
| D1: | -32.9 | Horizontal: | 85 | PC Detector: | 3069 |
| Pole Bias: | 0.0 | Vertical: | 467 | | |
| Hexapole Bias: | -5.0 | D2: | -160 | | |
| Nebuliser: | 0.80 | DA: | -80.0 | | |
| Sample Depth: | 150 | Cool: | 13.0 | | |
| | | Auxiliary: | 0.90 | | |

**Comments:** S was prepared by taking 50 µL of 23704 (Horizon) and adding 0.5 mL conc. HNO3 and bringing to 50 mL final volume with ASTM Type II water.
S10 was prepared by taking 8.0 mL of S0, MS-15-098 (4184/97) and adding 2.0 mL of S03, **28396** (Horizon), and mixing in a 14 mL Falcon tube.
S50000 was prepared by taking 4.0 mL of S0, MS-15-077 (4184/97) and adding 4.0 mL of S09, **28401** (Horizon), and mixing in a 14 mL Falcon tube.

A Cross Calibration was performed using solution MS-15-028 (4184/95), (Horizon #**25397**), before the performance report.
A Performance report was done to tune the instrument using "CLP" and solution MS-15-027 (4184/95), (Horizon #**25851**), before calibration.

**Dilutions:** Soils samples were diluted 5x prior to analysis to bring acid concentration down by mixing 2 mL of sample with 8 mL of S0, MS-15-098 (4184/97).
Serial dilution done by pipetting 2 mL of sample MF9M21 into 8 mL of MS-15-098 (4184/97) into a polypropylene tube, capping and shaking to mix.
Serial dilution done by pipetting 2 mL of sample MF9M15 into 8 mL of MS-15-098 (4184/97) into a polypropylene tube, capping and shaking to mix.

Post digestion spike for Sb: spiked 10 mL of sample MF9M21 with 100 µl of 2 µg/mL Sb, (Horizon #**23704**), for a target of 20 µg/L.
Post digestion spike for Sb: spiked 10 mL of sample MF9M15 with 100 µl of 2 µg/mL Sb, (Horizon #**23704**), for a target of 20 µg/L.

Project No. NA

TITLE ALS Laboratory - ICPM02 Instrument LOGBOOK

Book No. 4183



From Page No. 67

| DATE | Time ON | Time OFF | TOTAL Time | Method | Matrix | Acct.# | W.O. IDs / Comments | Run# | # of Samples | Init. |
|---|---|---|---|---|---|---|---|---|---|---|
| 05/11/2015 | 13:50<br>15:22 | Tune<br>17:38 | —<br>136 min | ISM02.2 | SOIL<br>WATER | 8201 | CLP Tune Passed<br>MX1R04, MX1R08 | MS215043 | 2 | JK |
| ↓ | 15:22 | 18:31 | 189 min | 6020 | SOLID | 8001 | 1511734 SALT | ↓ | 2 | JK |
| 05/15/2015 | 09:21<br>10:45 | Tune<br>13:33 | —<br>188 min | 6020 | Bulk<br>Liquid | 1101 | 6020 Tune Passed<br>1513185, 8, 9, 90, 1, 2, 3, 168, 176, 1513432 | MS215044 | 11 | KB |
| 05/18/2015 | 10:09<br>12:07 | Tune<br>14:31 | —<br>144 min | 6020 | Bulk | 1101 | 6020 Tune Passed<br>1513469, 72, 73, 74, 1513527, 806 | MS215045 | 7 | KB |
| 05/19/2015 | 11:09<br>11:44 | Tune<br>14:52 | —<br>188 min | 6020 | Bulk | 1101 | 6020 Tune Passed<br>1513439, 1513268, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, | MS215046 | 20 | KB |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1513428, 29, 30, 31, 33, 34, 37, 38 | ↓ | ↓ | ↓ |
| 05/20/2015 | 10:04<br>10:41 | Tune<br>14:18 | —<br>217 min | 6020 | Bulk<br>Liquid | 1101 | 1513549, 57, 59, 60, 61, 64, 69, 71, 74, 77, 923, 24, 7, 8, 9, | MS215047 | 18 | KB |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1513869, 1514021, 27 | ↓ | ↓ | ↓ |
| 05/22/2015 | 08:34<br>09:07 | Tune<br>13:52 | —<br>291 min | ISM01.3 | SOIL | 8201 | CLP Tune Passed<br>ISM01.3 SOIL MDL's | MS215048 | 28 | JK |
| 05/27/2015 | 13:00<br>13:28 | —<br>15:26 | Tune<br>118 min | 6020 | WATER | 8001 | 6020 Tune Passed<br>(Cd .25) 1513204 | MS215049 | 4 | JK |
| 05/27/2015 | 16:06<br>17:23 | Tune<br>19:39 | —<br>136 min | ISM02.2 | SOIL<br>WATER | 8201 | CLP Tune Passed<br>MX1549, MX1553 | MS215050 | 2 | JK |
| ↓ | 17:23 | 20:14 | 171 min | ISM01.3 | WATER | 8201 | (Bridge) 1513993 | ↓ | 1 | JK |
| 05/28/2015 | 11:40 | Tune | — | 6020 | SOIL | 8001 | 6020 Tune Passed | MS215051 | 20 | JK |
| ↓ | 12:14 | 15:37 | 203 min | ↓ | ↓ | ↓ | (LVL4) 1513332 | ↓ | ↓ | ↓ |
| 05/29/2015 | 12:17<br>18:13 | Tune<br>18:36 | —<br>323 min | 6020 | SOIL | 8001 | 6020 Tune Passed<br>(LVL4) 1513462 | MS215052 | 29 | JK |
| 06/03/2015 | 09:39<br>10:49 | Tune<br>13:50 | —<br>181 min | 6020 | Water | 8001 | 6020 Tune Passed<br>1514502, 1515220, 1513947 | MS215053 | 8 | KB |
| 06/05/2015 | 09:41<br>10:54 | Tune<br>13:56 | —<br>182 min | 6020 | DS Bulk | 1101 | 1515020, 1, 2, 4, 5, 1515413, 5, 9, 20, 3, 5, 31, 2, 40, 51, 53, 54 | MS215054 | 17 | KB & PAF |
| 06/09/2015 | 09:28<br>10:01 | Tune<br>16:15 | —<br>374 min | ISM01.3 | Soil | 8201 | WO 1514325 MF9L76 | MS215055<br>~~MS215055~~<br>KB 6/11/2015 | 12 | KB |
| 06/09/2015 | 10:01 | 16:15 | " | 200.8<br>6020 | Water<br>Bulk | 8001<br>1101 | 1515412, 1515674, 1515525 | MS215055 | 6 | KB |
| 06/11/2015 | 09:11<br>09:25 | Tune<br>13:48 | —<br>263 min | 6020 | Bulk<br>GW | 7001 | 6020 Tune Passed<br>1514650, 1516001 | MS215056 | 20 | KB |
| 06/16/2015 | 12:33<br>13:25 | Tune<br>18:03 | —<br>278 min | ISM01.3 | SOIL | 8201 | CLP Tune Passed<br>W.O. 1515388 MF9L98 | MS215059 | 25 | JK |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | W.O. 1515562 MF9M36 | ↓ | ↓ | ↓ |
| 06/19/2015 | 14:02<br>14:32 | Tune<br>19:32 | —<br>300 min | ISM01.3 | SOIL | 8201 | CLP Tune Passed<br>W.O. 1515559 MF9M21 | MS215058 | 20 | JK |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | W.O. 1515392, 1515633 MF9M15 | ↓ | 13 | JK |

To Page No. ____

| Witnessed & Understood by me, | Date | Invented by | Date |
|---|---|---|---|
| | | Recorded by | |

ALS Laboratory

TITLE ~~DATACHEM LABORATORIES~~ - ICP-MS SOLUTIONS LOGBOOK.

KB 02/03/11

Project No. N/A

Book No. 4184

From Page No. X

RECIPES.

CLP ~~5.3~~ CRI 2/23/11 = USE "CLP-MS-CRQL-2" PRIMARY CONTAINING 10 µg/mL Ba; 5 µg/mL Se; 2 µg/mL Sb, Cr, Cu, Zn; 1 µg/mL Ag, As, Be, Cd, Co, Mn, Pb, Ni, Tl, V. SPIKE 0.05 mL TO A 50 mL TEFLON CLASS A FLASK, CONTAINING SOME ASTM TYPE II $H_2O$ WITH 0.5 mL OF $HNO_3$. BRING TO VOLUME WITH ASTM TYPE II $H_2O$. SEAL + SHAKE FLASK.

FINAL TARGETS: 10 µg/L Ba, 5 µg/L Se; 2 µg/L Sb, Cr, Cu, Zn; 1 µg/L Ag, As, Be, Cd, Co, Mn, Pb, Ni, Tl, V in 1% $HNO_3$

VARIAN TUNE = SPIKE 0.5 mL OF "VAR-TS-MS" PRIMARY CONTAINING 10 µg/mL Ba, Be, Ce, Co, In, Pb, Mg, Tl, Th AND 0.5 mL OF $HNO_3$ TO A 50 mL FLASK CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME WITH ASTM TYPE II $H_2O$. SEAL + SHAKE.

FINAL TARGETS: 100 µg/L Ba, Be, Ce, Co, In, Pb, Mg, Tl, Th in 1% $HNO_3$.

6020 TUNE = SPIKE 0.5 mL OF "6020TS" PRIMARY CONTAINING 10 µg/mL Co, In, Li, Tl AND 0.5 mL OF $HNO_3$ TO A 50 mL FLASK CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME WITH ASTM TYPE II $H_2O$. SEAL + SHAKE.

FINAL TARGETS: 100 µg/L Co, In, Li, Tl in 1% $HNO_3$.

TUNE A = SPIKE ~~0.5~~ 0.05 NE 4/13/04 mL OF "TUNE A" PRIMARY, CONTAINING 10 µg/mL OF Li, Be, Co, Ni, In, Ba, Ce, Pb, U + 100 µg/mL OF As, Se, AND 0.5 mL OF $HNO_3$ TO A 50 mL CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME WITH ASTM TYPE II $H_2O$. SEAL + SHAKE.

FINAL TARGETS: 10 µg/L Li, Be, Co, Ni, In, Ba, Be, Ce, Pb, U; 100 µg/L As, Se.

TUNE B = SPIKE 0.5 mL OF "TUNE B" PRIMARY, CONTAINING 100 µg/mL Be; 50 µg/mL Li; 25 µg/mL Mg, Se; 20 µg/mL Co; 10 µg/mL Y, In, Ce, Tl; 5 µg/mL Tb, U, AND 0.5 mL OF $HNO_3$ TO A 50 mL FLASK. BRING TO VOLUME. SEAL + SHAKE.

FINAL TARGETS: 1000 µg/L Be; 500 µg/L Li; 250 µg/L Mg, Sc; 200 µg/L Co; 100 µg/L Y, In, Ce, Tl; 50 µg/L Tb, U in 1% $HNO_3$.

VAR IS = SPIKE 40 mL OF "6020ISS" PRIMARY, CONTAINING 10 µg/mL Bi, Ho, In, $^6Li$, Rh, Sc, Tb, Y AND 20 mL OF $HNO_3$ TO A 2L CONTAINER CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME. SEAL + SHAKE.

FINAL TARGETS: 200 µg/L Bi, Ho, In, $^6Li$, Rh, Sc, Tb, Y in 1% $HNO_3$.

THERMO IS = SPIKE 4 mL OF "THERMO IS MIX" PRIMARY, CONTAINING 100 mg/L $^6Li$, Sc; 20 mg/L Ga, Y, In, Tb, Bi AND 20 mL OF $HNO_3$ TO A 2L CONTAINER CONTAINING SOM ASTM TYPE II $H_2O$. BRING TO VOLUME. SEAL + SHAKE.

FINAL TARGETS: 200 µg/L $^6Li$, Sc; 40 µg/L Ga, Y, In, Tb, Bi in 1% $HNO_3$.

2%/0.05% RINSE = ADD ~~20~~ 40 NE 4/13/04 mL OF $HNO_3$ AND 1 mL OF HCl or 2 mL OF 1:1 HCl TO A 2L CONTAINER. BRING TO VOLUME, SEAL + SHAKE.

FINAL TARGETS: 2% $HNO_3$/0.05% HCl

5%/1% = ADD 100 mL OF $HNO_3$ AND 20 mL OF HCl TO A 2L CONTAINER. BRING TO VOLUME. SEAL + SHAKE.

FINAL TARGETS: 5% $HNO_3$/1% HCl.

To Page No. 2

| Witnessed & Understood by me, | Date | Invented by | Date |
|---|---|---|---|
| Kristie Bettini | 01/24/05 | Recorded by [signature] | 01/24/05 |

TITLE ALS Laboratory ~~DATACHEM LABORATORIES~~ - ICP-MS SOLUTIONS LOGBOOK. KB 02/03/11

Project No. N/A

Book No. 4184

From Page No. X

RECIPES

THERMO 6020 ICSA = ADD 1mL OF ICSA PRIMARY TO 9mL OF 1% $HNO_3$ + MIX.

THERMO 6020 ICSAB = ADD 1mL OF ICSA PRIMARY, 0.1mL OF ICSAB PRIMARY TO 8.9 mL OF 1% $HNO_3$ + MIX.

X-CAL = SPIKE 1.25 mL OF "X-CAL" PRIMARY CONSISTING OF Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn AT 10 mg/L AND 0.5 mL OF $HNO_3$ TO A 50 mL FLASK CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME, STOPPER + SHAKE. ALL MASSES AT 250 mg/L AT FINAL.

1% $HNO_3$ = ADD 10 mL OF $HNO_3$ TO A 1L FLASK CONTAINING SOME ASTM TYPE II $H_2O$. BRING TO VOLUME WITH MORE ASTM TYPE II $H_2O$. SEAL + SHAKE. USED FOR DO, ICB, CCB + DILUTIONS.

1:4 HCl = Add 200 mL HCl to 1 L container with some ASTM Type II $H_2O$. Bring to volume with more ASTM Type II $H_2O$. Seal & Shake. Used for sample preparation, soils.

1:1 HCl = Add 500 mL ASTM Type II $H_2O$ to 1L container. Add 500 mL Hcl to container, cap and mix by shaking. Used for sample preparation.

1:1 $HNO_3$ = Add 500 mL ASTM Type II $H_2O$ to 1 L container. Add 500 mL $HNO_3$ to container, seal and shake to mix. Used for sample preparation.

KB 2/16/06
2% $HNO_3$ with Au Add 20 mL of $HNO_3$ to 1L container with some ASTM Type II $H_2O$ in it. Add 1mL of 1:1 HCl and 10 mL of 100 µg/mL Au. Bring to 1L volume, cap & shake. Use for Hg analysis

DO-Urine = To a 500 mL volumetric flask containing ~250 mL of ASTM Type II Water add 50 mL of UriSub and 5 mL of concentrated nitric acid. Dilute to volume with ASTM Type II water, stopper and mix, transfer to teflon bottles for storage.

CLP KB 2/23/11
~~5.4~~ CRI: Use "CLP-MS-CRQL-3" primary containing 10 µg/mL Ba; 5 µg/mL Se, V; 2 µg/mL Cr3, Cu, Sb, Zn; 1 µg/mL Ag, As, Be, Cd, Co, Mn, Ni, Pb, Tl. Spike 0.05 mL to a 50 mL Teflon class A flask, containing some ASTM Type II $H_2O$ with 0.5 mL of $HNO_3$. Bring to volume with ASTM Type II $H_2O$, Seal & shake. Final Targets: 10 µg/L B; 5 µg/L Se, V; 2 µg/L Cr3, Cu, Sb, Zn; 1 µg/L Ag, As, Be, Cd, Co, Mn, Ni, Pb, Tl.

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| Witnessed & Understood by me, | Date | Invented by | Date |
|---|---|---|---|
| | | Recorded by | |

Project No. NA

TITLE ALS-SLC ICP-MS Solution Logbook

Book No. 4184



From Page No. 94

| Date | ICP-MS Solution # | Solution Type | Primary Solution ID # (Horizon) | Recipe Page | Expiration Date | Acid Lots | Comments | Init. |
|---|---|---|---|---|---|---|---|---|
| 12/29/2014 | MS-14-218 | 1% $HNO_3$ NO In | NA | 2 | 06/29/2015 | $HNO_3$-1213120 | NA | KB |
| 12/29/2014 | MS-14-219 | Agilent ISS | 22947 | NA | 04/01/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/02/2015 | MS-15-001 | 1:4 HCl | NA | 2 | 07/02/2015 | HCl-4013050 | NA | KB |
| 01/05/2015 | MS-15-002 | Agilent Tune | 25850 | NA | 07/05/2015 | $HNO_3$-1213120 | 1/5/15 KB 250 mL 25mL/~~50mL~~ in 1% $HNO_3$ | KB |
| 01/05/2015 | MS-15-003 | 6020 Tune | 25852 | 1 | 07/05/2015 | $HNO_3$-1213120 | NA | KB |
| 01/05/2015 | MS-15-004 | Rinse 1%-0.5% | NA | NA | 07/05/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 01/06/2015 | MS-15-005 | Agilent ISS | 24864 | NA | 07/06/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/12/2015 | MS-15-006 | 1% $HNO_3$ | NA | 2 | 07/12/2015 | $HNO_3$-1213120 | NA | KB |
| 01/14/2015 | MS-15-007 | Agilent ISS | 24864 | NA | 07/14/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/16/2015 | MS-15-008 | Rinse 1%-0.5% | NA | NA | 07/16/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 01/19/2015 | MS-15-009 | Rinse 2%-0.05% | NA | 1 | 07/19/2015 | $HNO_3$-1213120 HCl-4213110 | 4L | JK |
| 01/19/2015 | MS-15-010 | 1% $HNO_3$ | NA | 2 | 07/19/2015 | $HNO_3$-1213120 | NA | JK |
| 01/20/2015 | MS-15-011 | Agilent ISS | 24864 | NA | 07/20/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/22/2015 | MS-15-012 | 1% $HNO_3$ | NA | 2 | 07/22/2015 | $HNO_3$-1213120 | NA | KB |
| 01/22/2015 | MS-15-013 | Agilent ISS | 24864 | NA | 07/22/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/27/2015 | MS-15-014 KB 1/27/15 | Rinse ~~2%-0~~ 1%/0.5% | NA | NA | 07/27/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 01/27/2015 | MS-15-015 | Agilent ISS | 24864 | NA | 07/27/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 01/27/2015 | MS-15-016 | 1% $HNO_3$ | NA | 2 | 07/27/2015 | $HNO_3$-1213120 | NA | KB |
| 01/28/2015 | MS-15-017 | 1:1 $HNO_3$ | NA | 2 | 07/28/2015 | $HNO_3$-1213120 | NA | KB |
| 01/30/2015 | MS-15-018 | 6020 Tune | 25852 | 1 | 07/30/2015 | $HNO_3$-1213120 | NA | KB |
| 02/02/2015 | MS-15-019 | 1:4 HCl | NA | 2 | 08/02/2015 | HCl-4213110 | NA | KB |
| 02/02/2015 | MS-15-020 | Agilent ISS | 24864 | NA | 08/02/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/04/2015 | MS-15-021 | 1:19 $HNO_3$ | NA | NA | 08/04/2015 | $HNO_3$-1213120 | 50mL $HNO_3$/1L | KB |
| 02/05/2015 | MS-15-022 | 1% $HNO_3$ Rinse | NA | 2 | 08/05/2015 | $HNO_3$-1213120 | NA | KB |
| 02/06/2015 | MS-15-023 | 1%-0.5% | NA | NA | 08/06/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 02/06/2015 | MS-15-024 | Agilent ISS | 24864 | NA | 08/06/2015 | $HNO_3$-1213120 ~~HCl-4213110~~ | 4mL/50mL in 1% $HNO_3$ JK 02/08/15 | KB |
| 02/08/2015 | MS-15-025 | 1% $HNO_3$ | NA | 2 | 08/08/2015 | $HNO_3$-1213120 HCl-4213110 | NA | JK |
| 02/08/2015 | MS-15-026 | Rinse 2%-0.05% | NA | 1 | 08/08/2015 | $HNO_3$-1213120 | 4L | JK |
| 02/08/2015 | MS-15-027 | Var Tune | 25851 | 1 | 08/08/2015 | $HNO_3$-1213120 | 250 mL | JK |
| 02/08/2015 | MS-15-028 | X-Cal | 25397 | 1 | 08/08/2015 | $HNO_3$-1213120 | 200 mL | JK |
| 02/09/2015 | MS-15-029 | 1:1 $HNO_3$ | NA | 2 | 08/09/2015 | $HNO_3$-1213120 | NA | JK |
| 02/10/2015 | MS-15-030 | Agilent ISS | 24864 | NA | 08/10/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/12/2015 | MS-15-031 | Agilent ISS | KB 2/12/15 NA 24864 | NA | 08/12/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/12/2015 | MS-15-032 S KB 2/16/15 | 1% $HNO_3$ | NA | 2 | 08/12/2015 | $HNO_3$-1213120 | NA | KB |
| 02/16/2015 | MS-15-033 | Agilent ISS | 24864 | NA | 08/16/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/16/2015 | MS-15-034 | Rinse 1%-0.5% | NA | NA | 08/16/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |

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TITLE ALS-SLC ICP-MS Solution Logbook

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| Date | ICP-MS Solution # | Solution Type | Primary Solution ID # (Horizon) | Recipe Page | Expiration Date | Acid Lots | Comments | Init. |
|---|---|---|---|---|---|---|---|---|
| 02/19/2015 | MS-15-035 | 1:4 HCl | NA | 2 | 08/19/2015 | HCl-4213110 | NA | KB |
| 02/19/2015 | MS-15-036 | Agilent ISS | 24864 | NA | 08/19/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/19/2015 | MS-15-037 | 1% $HNO_3$ Rinse | NA | 2 | 08/19/2015 | $HNO_3$-1213120 KB 2/19/15 | NA | KB |
| 02/23/2015 | MS-15-038 | 1%-0.5% | NA | NA | 08/23/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 02/23/2015 | MS-15-039 | Agilent ISS | 24864 | NA | 08/23/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |
| 02/25/2015 | MS-15-040 | 1:1 $HNO_3$ | NA | 2 | 08/25/2015 | $HNO_3$-1213120 | NA | JK |
| 02/25/2015 | MS-15-041 | VAR ISS | 24864 | 1 | 08/25/2015 | $HNO_3$-1213120 | 4L | JK |
| 02/25/2015 | MS-15-042 1% $HNO_3$ | 1% $HNO_3$ | NA | 2 | 08/25/2015 | $HNO_3$-1213120 | NA | JK |
| 02/25/2015 | MS-15-043 | Agilent Tune | 25850 | NA | 08/25/2015 | $HNO_3$-1213120 | 25µL/250mL in 1% $HNO_3$ | KB |
| 02/25/2015 | MS-15-044 | 6020 Tune | 25852 | 1 | 08/25/2015 | $HNO_3$-1213120 | NA | KB |
| 02/27/2015 | MS-15-045 | 1:1 $HNO_3$ | NA | 2 | 08/27/2015 | $HNO_3$-1214040 | NA | KB |
| 03/02/2015 | MS-15-046 | Agilent ISS | 24864 | NA | 09/02/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 03/02/2015 | MS-15-047 | 0.1% $NH_4OH$ | $NH_4OH$ BDH Aristar Lot 20110347 2 | NA | 09/02/2015 | NA | 1mL $NH_4OH$/1L $H_2O$ | KB |
| 03/04/2015 | MS-15-048 | 1% $HNO_3$ | NA | 2 | 09/04/2015 | $HNO_3$-1214040 | NA | KB |
| 03/06/2015 | MS-15-049 | Agilent ISS | 24864 | NA | 09/06/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 03/09/2015 | MS-15-050 | 1%-0.5% Rinse | NA | NA | 09/09/2015 | $HNO_3$-1214040 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 03/09/2015 | MS-15-051 | P/A Tune | 25287, 25288 | NA | 09/09/2015 | $HNO_3$-1214040 | 500mL of each to 50mL in 1% $HNO_3$ | KB |
| 03/13/2015 | MS-15-052 | 1% $HNO_3$ | NA | 2 | 09/13/2015 | $HNO_3$-1214040 | NA | KB |
| 03/17/2015 | MS-15-053 | Agilent ISS | 24864 | NA | 09/17/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 03/17/2015 | MS-15-054 | 1% $HNO_3$ | NA | 2 | 09/17/2015 | $HNO_3$-1214040 | NA | JK |
| 03/18/2015 | MS-15-055 | 1:4 HCl | NA | 2 | 09/18/2015 | HCl-4213110 | NA | JK |
| 03/24/2015 | MS-15-056 | 1%-0.5% Rinse | NA | NA | 09/24/2015 | $HNO_3$-1214040 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 03/24/2015 | MS-15-057 | 6020 Tune | 25852 | 1 | 09/24/2015 | $HNO_3$-1214040 | NA | KB |
| 03/24/2015 | MS-15-058 | Agilent ISS | 24864 | NA | 09/24/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 03/25/2015 | MS-15-059 | 1% $HNO_3$ | NA | 2 | 09/25/2015 | $HNO_3$-1214040 | NA | KB |
| 03/26/2015 | MS-15-060 | Agilent ISS | 24864 | NA | 09/26/2015 | $HNO_3$-1214040 ~~$HNO_3$~~ KB 3/26/15 | 4mL/50mL in 1% $HNO_3$ | KB |
| 03/27/2015 | MS-15-061 | 1:1 $HNO_3$ | NA | 2 | 09/27/2015 | $HNO_3$-1214040 | NA | KB |
| 04/01/2015 | MS-15-062 | 1% $HNO_3$ | NA | 2 | 10/01/2015 | $HNO_3$-1214040 | NA | KB |
| 04/02/2015 | MS-15-063 | Agilent ISS | 24864 | NA | 10/01/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 04/03/2015 | MS-15-064 | 0.1% $NH_4OH$ | $NH_4OH$ BDH Aristar Lot 20110347 2 | NA | 10/03/2015 | NA | 1mL $NH_4OH$/1L $H_2O$ | KB |
| 04/10/2015 | MS-15-065 | 1%-0.5% Rinse | NA | NA | 10/10/2015 | $HNO_3$-1214040 HCl-4213110 | 10mL $HNO_3$/5mL HCl in 1L | KB |
| 04/10/2015 | MS-15-066 | Agilent ISS | 24864 | NA | 10/10/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | KB |
| 04/10/2015 | MS-15-067 | VAR ISS | 24864 | 1 | 10/10/2015 | $HNO_3$-1214040 HCl-4213110 | 4L | JK |
| 04/10/2015 | MS-15-068 | 2%-0.05% Rinse | NA | 1 | 10/10/2015 | $HNO_3$-1214040 | 4L | JK |
| 04/14/2015 | MS-15-069 | 1% $HNO_3$ | NA | 2 | 10/14/2015 | $HNO_3$-1214040 | NA | KB |
| 04/14/2015 | MS-15-070 | Agilent ISS | 24864 | NA | 10/14/2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ KB | KB |

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| Date | ICP-MS Solution # | Solution Type | Primary Solution ID # (Horizon) | Recipe Page | Expiration Date | Acid Lots | Comments | Init. |
|---|---|---|---|---|---|---|---|---|
| 04/14/2015 | MS-15-071 | 1:4 HCl | NA | 2 | 10/14/2015 | HCl-4213110 HNO3-1214040 | NA | KB |
| 04/17/2015 | MS-15-072 | Rinse 1%-0.5% | NA | NA | 10/17/2015 | HCl-4213110 | 10mL HNO3/5mL HCl to 1L | KB |
| 04/17/2015 | MS-15-073 | 0.1% NH4OH | NH4OH BDH Aristar Lot 20110347 2 | NA | 10/17/2015 | NA | 1mL NH4OH/1L H2O | KB |
| 04/20/2015 | MS-15-074 | 1% HNO3 | NA | 2 | 10/20/2015 | HNO3-1214040 | NA | KB |
| 04/20/2015 | MS-15-075 | 6020 Tune | 25852 | NA | 10/20/2015 | HNO3-1214040 | KB 4/28/15 NA ~~4mL/50mL in 1% HNO3~~ | KB |
| 04/20/2015 | MS-15-076 | Agilent ISS | 24864 | NA | 10/20/2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | KB |
| 04/21/2015 | MS-15-077 | 1% HNO3 | NA | 2 | 10/21/2015 | HNO3-1214040 | NA | JK |
| 04/24/2015 | MS-15-078 | Agilent Tune | 25850 | NA | 10/24/2015 | HNO3 1214040 | 25mL/250mL 1% HNO3 | KB |
| ~~04/27/2015~~ | ~~MS-15-079~~ | ~~6020 Tune~~ | KB 4/27/2015 | | | | | |
| 04/27/2015 | MS-15-080 | Agilent ISS No In | 24864 | NA | 10/27/2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | KB |
| 28-Apr-2015 | MS-15-081 | Agilent ISS | 27582 | NA | 28-Oct-2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | PAJ |
| 1-May-2015 | MS-15-082 | Rinse 1%/0.5% | NA | NA | 1-Nov-2015 | HNO3-1214040 HCl-4213110 | 10mL HNO3/5mL HCl to 1L | PAJ |
| 1-May-2015 | MS-15-083 | 1% HNO3 | NA | 2 | 1-Nov-2015 | HNO3-1214040 | NA | PAJ |
| 05/04/2015 | MS-15-084 | 0.1% NH4OH | NH4OH BDH Aristar Lot 20110347 2 | NA | 11/04/2015 | NA | 1mL NH4OH/1L H2O | KB |
| 6-May-2015 | MS-15-085 | Agilent ISS | 24864 | NA | 6-Nov-2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | PAJ |
| 05/07/2015 | MS-15-086 | 1:1 HNO3 | NA | 2 | 11/07/2015 | HNO3-1214040 | NA | JK |
| 05/08/2015 | MS-15-087 | 1% HNO3 | NA | 2 | 11/08/2015 | HNO3-1214040 | NA | KB |
| 05/11/2015 | MS-15-088 | Agilent ISS | 24864 | NA | 11/11/2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | KB |
| 05/19/2015 | MS-15-089 | 1% HNO3 | NA | 2 | 11/19/2015 | HNO3-1214040 | NA | KB |
| 05/19/2015 | MS-15-090 | Rinse 2%/0.05% | NA | 1 | 11/19/2015 | HNO3-1214040 HCl-4213110 | 2L | KB |
| 20-May-2015 | MS-15-091 | Rinse 1%/0.5% | NA | NA | 20-Nov-2015 | HNO3-1214040 HCl-4213110 | 10mL HNO3/5mL HCl to 1L | PAJ |
| 20-May-2015 | MS-15-092 | Iodine Agilent ISS | 24864 | NA | 20-Nov-2015 | 0.1% NH4OH | 4mL/50mL in 0.1% NH4OH | PAJ |
| 20-May-2015 | MS-15-093 | Agilent ISS | 24864 | NA | 20-Nov-2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | PAJ |
| 05/21/2015 | MS-15-094 | 6020 Tune | 25850 | ~~NA~~ 1 KB 8/21/15 | 11/1/2015 | HNO3-1214040 | NA | KB |
| 05/22/2015 | MS-15-095 | 1% HNO3 | NA | 2 | 11/22/2015 | HNO3-1214040 | NA | KB |
| 05/22/2015 | MS-15-096 | 1:4 HCl | NA | 2 | 11/22/2015 | HCl-4213110 | NA | KB |
| 26-May-2015 | MS-15-097 | 1:1 HNO3 | NA | 2 | 26-May-2015 | HNO3-1214040 | NA | PAJ |
| 05/27/2015 | MS-15-098 | 1% HNO3 | NA | 2 | 11/27/2015 | HNO3-1214040 | NA | JK |
| 05/27/2015 | MS-15-099 | Rinse 2%-0.05% | NA | 1 | 11/27/2015 | HCl-4213110 HNO3-1214040 | 4L | JK |
| 05/27/2015 | MS-15-100 | 28-May-2015 PAJ Agilent Tune | 25850 | NA | 11/27/2015 | HNO3-1214040 | 25mL/250mL in 1% HNO3 | KB |
| 28-May-2015 | MS-15-101 | 0.1% NH4OH | NH4OH BDH Aristar lot 20110347 2 | NA | 28-Nov-2015 | NA | 1mL NH4OH/1L H2O | PAJ |
| 05/28/2015 | MS-15-102 | Agilent ISS No In | 27582 JK 05-28-2015 | NA | 11/28/2015 | HNO3-1214040 | 4mL/50mL in 1% HNO3 | KB |
| 05/28/2015 | MS-15-103 | 6020 Tune | ~~24137~~ 25852 | 1 | ~~07~~/01/2015 JK 05-28-2015 | HNO3-1214040 | 250mL | JK |
| 06/03/2015 | MS-15-104 | 1% HNO3 | NA | 2 | 12/03/2015 | HNO3-1214040 | NA | KB |
| 4-Jun-2015 | MS-15-105 | Rinse 1%/0.5% | NA | NA | 4-Dec-2015 | HNO3-1214040 HCl-4213110 | 10mL HNO3/5mL HCl to 1L 4-Jun-2015 PAJ | PAJ |
| 4-Jun-2015 | MS-15-106 | Agilent ISS | 24864 | NA | 4-Dec-2015 | HNO3-1214040 | 4mL/50mL in 0.1% HNO3 | PAJ |

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Project No.

TITLE ALS-SLC ICP-MS Solution Logbook

Book No. 4184



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| Date | ICP-MS Solution # | Solution Type | Primary Solution ID# (Horizon) | Recipe page | Expiration Date | Acid Lots | Comments | Initials |
|---|---|---|---|---|---|---|---|---|
| 4-Jun-2015 | MS-15-107 | Agilent ISS | 24864 | NA | 4-Dec-2015 | $HNO_3$-1214040 | 4mL/50mL in 1% $HNO_3$ | PD |
| 5-Jun-2015 | MS-15-108 | 1% $HNO_3$ Rinse | NA | 2 | 5-Dec-2015 | $HNO_3$-1214040 | NA | PD |
| 06/05/2015 | MS-15-109 | 2% - 0.5% | NA | 1 | 12/05/2015 | $HNO_3$-1214040 HCl-4213110 | KB 6/5/15 4 L | KB |
| 06/10/2015 | MS-15-110 | 1:1 $HNO_3$ | NA | 2 | 12/10/2015 | $HNO_3$-1213120 | NA | KB |
| 10-Jun-2015 | MS-15-111 | 1% $HNO_3$ | NA | 2 | 10-Dec-2015 | $HNO_3$ 1213120 | NA | PD |
| 06/15/2015 | MS-15-112 | 1:4 HCl | NA | 2 | 12/15/2015 | HCl-4213110 | NA | KB |
| 06/17/2015 | MS-15-113 | 1:1 $HNO_3$ Rinse | NA | 2 | 12/17/2015 | $HNO_3$-1213120 | NA | JK |
| 06/18/2015 | MS-15-114 | 1% - 0.5% | NA | NA | 12/18/2015 | $HNO_3$-1213120 HCl-4213110 | 10mL $HNO_3$/5mL HCl to 1L | KB |
| 06/18/2015 | MS-15-115 | Agilent ISS | 24864 | NA | 09/01/2015 | $HNO_3$-1213120 | 4mL/50mL in 1% $HNO_3$ | KB |

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# STANDARD REPORT

## Working Standard - ICP-MS S50

| ICP-MS S50 | | Description - ICP-MS S50 ISM01.3 |
|---|---|---|
| **Standard:** 28396 | **Created By:** J. Kershisnik | **Amount:** 200 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 50 ug/L |
| 2 | 7440-36-0 | Antimony | 50 ug/L |
| 3 | 7440-38-2 | Arsenic | 50 ug/L |
| 4 | 7440-39-3 | Barium | 50 ug/L |
| 5 | 7440-41-7 | Beryllium | 50 ug/L |
| 6 | 7440-43-9 | Cadmium | 50 ug/L |
| 7 | 7440-70-2 | Calcium | 50 ug/L |
| 8 | 7440-47-3 | Chromium | 50 ug/L |
| 9 | 7440-48-4 | Cobalt | 50 ug/L |
| 10 | 7440-50-8 | Copper | 50 ug/L |
| 11 | 7439-89-6 | Iron | 50 ug/L |
| 12 | 7439-92-1 | Lead | 50 ug/L |
| 13 | 7439-95-4 | Magnesium | 50 ug/L |
| 14 | 7439-96-5 | Manganese | 50 ug/L |
| 15 | 7440-02-0 | Nickel | 50 ug/L |
| 16 | 7440-09-7 | Potassium | 50 ug/L |
| 17 | 7782-49-2 | Selenium | 50 ug/L |
| 18 | 7440-22-4 | Silver | 50 ug/L |
| 19 | 7440-23-5 | Sodium | 50 ug/L |
| 20 | 7440-28-0 | Thallium | 50 ug/L |
| 21 | 7440-62-2 | Vanadium | 50 ug/L |
| 22 | 7440-66-6 | Zinc | 50 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 197.5 mL | 12/31/2025 |
| 26205 | 6020Cal1 | ICPMS EPA 6020 Cal#1 | IP-PS-14-051 | 0.5 mL | 12/01/2015 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 2 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ICP-MS S200

| ICP-MS S200 | | Description - ICP-MS S200 ISM01.3 |
|---|---|---|
| **Standard:** 28397 | **Created By:** J. Kershisnik | **Amount:** 100 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 200 ug/L |
| 2 | 7440-36-0 | Antimony | 200 ug/L |
| 3 | 7440-38-2 | Arsenic | 200 ug/L |
| 4 | 7440-39-3 | Barium | 200 ug/L |
| 5 | 7440-41-7 | Beryllium | 200 ug/L |
| 6 | 7440-43-9 | Cadmium | 200 ug/L |
| 7 | 7440-70-2 | Calcium | 200 ug/L |
| 8 | 7440-47-3 | Chromium | 200 ug/L |
| 9 | 7440-48-4 | Cobalt | 200 ug/L |
| 10 | 7440-50-8 | Copper | 200 ug/L |
| 11 | 7439-89-6 | Iron | 200 ug/L |
| 12 | 7439-92-1 | Lead | 200 ug/L |
| 13 | 7439-95-4 | Magnesium | 200 ug/L |
| 14 | 7439-96-5 | Manganese | 200 ug/L |
| 15 | 7440-02-0 | Nickel | 200 ug/L |
| 16 | 7440-09-7 | Potassium | 200 ug/L |
| 17 | 7782-49-2 | Selenium | 200 ug/L |
| 18 | 7440-22-4 | Silver | 200 ug/L |
| 19 | 7440-23-5 | Sodium | 200 ug/L |
| 20 | 7440-28-0 | Thallium | 200 ug/L |
| 21 | 7440-62-2 | Vanadium | 200 ug/L |
| 22 | 7440-66-6 | Zinc | 200 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 98 mL | 12/31/2025 |
| 26205 | 6020Cal1 | ICPMS EPA 6020 Cal#1 | IP-PS-14-051 | 1 mL | 12/01/2015 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ICP-MS S500

| ICP-MS S500 | | Description - ICP-MS S500 ISM01.3 |
|---|---|---|
| **Standard:** 28398 | **Created By:** J. Kershisnik | **Amount:** 100 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 500 ug/L |
| 2 | 7440-36-0 | Antimony | 500 ug/L |
| 3 | 7440-38-2 | Arsenic | 500 ug/L |
| 4 | 7440-39-3 | Barium | 500 ug/L |
| 5 | 7440-41-7 | Beryllium | 500 ug/L |
| 6 | 7440-43-9 | Cadmium | 500 ug/L |
| 7 | 7440-70-2 | Calcium | 500 ug/L |
| 8 | 7440-47-3 | Chromium | 500 ug/L |
| 9 | 7440-48-4 | Cobalt | 500 ug/L |
| 10 | 7440-50-8 | Copper | 500 ug/L |
| 11 | 7439-89-6 | Iron | 500 ug/L |
| 12 | 7439-92-1 | Lead | 500 ug/L |
| 13 | 7439-95-4 | Magnesium | 500 ug/L |
| 14 | 7439-96-5 | Manganese | 500 ug/L |
| 15 | 7440-02-0 | Nickel | 500 ug/L |
| 16 | 7440-09-7 | Potassium | 500 ug/L |
| 17 | 7782-49-2 | Selenium | 500 ug/L |
| 18 | 7440-22-4 | Silver | 500 ug/L |
| 19 | 7440-23-5 | Sodium | 500 ug/L |
| 20 | 7440-28-0 | Thallium | 500 ug/L |
| 21 | 7440-62-2 | Vanadium | 500 ug/L |
| 22 | 7440-66-6 | Zinc | 500 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 96.5 mL | 12/31/2025 |
| 26205 | 6020Cal1 | ICPMS EPA 6020 Cal#1 | IP-PS-14-051 | 2.5 mL | 12/01/2015 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - MS ISM S2500

| MS ISM S2500 | | Description - ISM01.3 ICP-MS S2500 |
|---|---|---|
| **Standard:** 28399 | **Created By:** J. Kershisnik | **Amount:** 50 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 2500 ug/L |
| 2 | 7440-36-0 | Antimony | 2500 ug/L |
| 3 | 7440-38-2 | Arsenic | 2500 ug/L |
| 4 | 7440-39-3 | Barium | 2500 ug/L |
| 5 | 7440-41-7 | Beryllium | 2500 ug/L |
| 6 | 7440-43-9 | Cadmium | 2500 ug/L |
| 7 | 7440-70-2 | Calcium | 2500 ug/L |
| 8 | 7440-47-3 | Chromium | 2500 ug/L |
| 9 | 7440-48-4 | Cobalt | 2500 ug/L |
| 10 | 7440-50-8 | Copper | 2500 ug/L |
| 11 | 7439-89-6 | Iron | 2500 ug/L |
| 12 | 7439-92-1 | Lead | 2500 ug/L |
| 13 | 7439-95-4 | Magnesium | 2500 ug/L |
| 14 | 7439-96-5 | Manganese | 2500 ug/L |
| 15 | 7440-02-0 | Nickel | 2500 ug/L |
| 16 | 7440-09-7 | Potassium | 2500 ug/L |
| 17 | 7440-23-5 | Sodium | 2500 ug/L |
| 18 | 7440-28-0 | Thallium | 2500 ug/L |
| 19 | 7440-62-2 | Vanadium | 2500 ug/L |
| 20 | 7440-66-6 | Zinc | 2500 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 43.25 mL | 12/31/2025 |
| 27946 | DATACHEM-1 | ICPMS 20 ppm (No Ag or Se) | IP-PS-15-013 | 6.25 mL | 06/01/2016 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 0.5 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - MS ISM S5000

| MS ISM S5000 | Description - ISM01.3 ICP-MS S5000 |
|---|---|

**Standard:** 28400 **Created By:** J. Kershisnik **Amount:** 50 mL
**MFG:** JTK **Create Date:** 06/16/2015 **Expires:** 06/30/2015
**MFG Lot:** **Lab Lot:** 06/16/15 JTK **Usable:** Yes
**Part ID:**

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 5000 ug/L |
| 2 | 7440-36-0 | Antimony | 5000 ug/L |
| 3 | 7440-38-2 | Arsenic | 5000 ug/L |
| 4 | 7440-39-3 | Barium | 5000 ug/L |
| 5 | 7440-41-7 | Beryllium | 5000 ug/L |
| 6 | 7440-43-9 | Cadmium | 5000 ug/L |
| 7 | 7440-70-2 | Calcium | 5000 ug/L |
| 8 | 7440-47-3 | Chromium | 5000 ug/L |
| 9 | 7440-48-4 | Cobalt | 5000 ug/L |
| 10 | 7440-50-8 | Copper | 5000 ug/L |
| 11 | 7439-89-6 | Iron | 5000 ug/L |
| 12 | 7439-92-1 | Lead | 5000 ug/L |
| 13 | 7439-95-4 | Magnesium | 5000 ug/L |
| 14 | 7439-96-5 | Manganese | 5000 ug/L |
| 15 | 7440-02-0 | Nickel | 5000 ug/L |
| 16 | 7440-09-7 | Potassium | 5000 ug/L |
| 17 | 7440-23-5 | Sodium | 5000 ug/L |
| 18 | 7440-28-0 | Thallium | 5000 ug/L |
| 19 | 7440-62-2 | Vanadium | 5000 ug/L |
| 20 | 7440-66-6 | Zinc | 5000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 37 mL | 12/31/2025 |
| 27946 | DATACHEM-1 | ICPMS 20 ppm (No Ag or Se) | IP-PS-15-013 | 12.5 mL | 06/01/2016 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 0.5 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ISM MS100000

| ISM MS100000 | Description - ICP-MS ISM01.3 S100,000 ug/L |
|---|---|

**Standard:** 28401 **Created By:** J. Kershisnik **Amount:** 100 mL
**MFG:** JTK **Create Date:** 06/16/2015 **Expires:** 06/30/2015
**MFG Lot:** **Lab Lot:** 06/16/15 JTK **Usable:** Yes
**Part ID:** ICP-MS ISM S100000

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-70-2 | Calcium | 100000 ug/L |
| 2 | 7440-09-7 | Potassium | 100000 ug/L |
| 3 | 7439-95-4 | Magnesium | 100000 ug/L |
| 4 | 7440-23-5 | Sodium | 100000 ug/L |
| 5 | 7429-90-5 | Aluminum | 100000 ug/L |
| 6 | 7439-89-6 | Iron | 100000 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 96 mL | 12/31/2025 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 1 mL | 10/01/2015 |
| 26849 | Al stock | 10,000 ug/mL Al Stock | SPEX Al 10,000 ug/mL | 1 mL | 01/30/2016 |
| 26850 | Fe Stock | 10,000 ug/mL Fe Stock | SPEX Fe 10,000 ug/mL | 1 mL | 01/30/2016 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ICPMS CLPICV

| ICPMS CLPICV | | Description - ICP-MS ICV ISM01.3 |
|---|---|---|
| **Standard:** 28402 | **Created By:** J. Kershisnik | **Amount:** 100 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 504.2 ug/L |
| 2 | 7440-36-0 | Antimony | 198.8 ug/L |
| 3 | 7440-38-2 | Arsenic | 199.8 ug/L |
| 4 | 7440-39-3 | Barium | 99.4 ug/L |
| 5 | 7440-41-7 | Beryllium | 99 ug/L |
| 6 | 7440-43-9 | Cadmium | 99.2 ug/L |
| 7 | 7440-70-2 | Calcium | 2005.2 ug/L |
| 8 | 7440-47-3 | Chromium | 98 ug/L |
| 9 | 7440-48-4 | Cobalt | 99.8 ug/L |
| 10 | 7440-50-8 | Copper | 98.4 ug/L |
| 11 | 7439-89-6 | Iron | 1016.4 ug/L |
| 12 | 7439-92-1 | Lead | 200.4 ug/L |
| 13 | 7439-95-4 | Magnesium | 1214.8 ug/L |
| 14 | 7439-96-5 | Manganese | 99.8 ug/L |
| 15 | 7440-02-0 | Nickel | 100.6 ug/L |
| 16 | 7440-09-7 | Potassium | 2004.2 ug/L |
| 17 | 7782-49-2 | Selenium | 205.8 ug/L |
| 18 | 7440-22-4 | Silver | 100.2 ug/L |
| 19 | 7440-23-5 | Sodium | 2019.4 ug/L |
| 20 | 7440-28-0 | Thallium | 205.6 ug/L |
| 21 | 7440-62-2 | Vanadium | 100.2 ug/L |
| 22 | 7440-66-6 | Zinc | 205 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 97 mL | 12/31/2025 |
| 25667 | CLPICP-ICV1 | CLP-ICP/ICPMS-ICV-1 | IP-PS-14-039 | 2 mL | 08/12/2020 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ICP-MS ICSA

| ICP-MS ICSA | | Description - ICP-MS ICSA ISM01.3 |
|---|---|---|
| **Standard:** 28403 | **Created By:** J. Kershisnik | **Amount:** 100 mL |
| **MFG:** JTK | **Create Date:** 06/16/2015 | **Expires:** 06/30/2015 |
| **MFG Lot:** | **Lab Lot:** 06/16/15 JTK | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 100000 ug/L |
| 2 | 7440-36-0 | Antimony | 1.5 ug/L |
| 3 | 7440-38-2 | Arsenic | 0.1 ug/L |
| 4 | 7440-39-3 | Barium | 1.2 ug/L |
| 5 | 7440-43-9 | Cadmium | 0.7 ug/L |
| 6 | 7440-70-2 | Calcium | 100000 ug/L |
| 7 | 7440-44-0 | Carbon | 200000 ug/L |
| 8 | 16887-00-6 | Chloride | 1000000 ug/L |
| 9 | 7440-47-3 | Chromium | 21 ug/L |
| 10 | 7440-48-4 | Cobalt | 1 ug/L |
| 11 | 7440-50-8 | Copper | 8 ug/L |
| 12 | 7439-89-6 | Iron | 100000 ug/L |
| 13 | 7439-92-1 | Lead | 4 ug/L |
| 14 | 7439-95-4 | Magnesium | 100000 ug/L |
| 15 | 7439-96-5 | Manganese | 7 ug/L |
| 16 | 7439-98-7 | Molybdenum | 2000 ug/L |
| 17 | 7440-02-0 | Nickel | 6 ug/L |
| 18 | 7723-14-0 | Phosphorus | 100000 ug/L |
| 19 | 7440-09-7 | Potassium | 100000 ug/L |
| 20 | 7782-49-2 | Selenium | 0.3 ug/L |
| 21 | 7440-23-5 | Sodium | 100000 ug/L |
| 22 | 63705-05-5 | Sulfur | 100000 ug/L |
| 23 | 7440-32-6 | Titanium | 2000 ug/L |
| 24 | 7440-62-2 | Vanadium | 0.5 ug/L |
| 25 | 7440-66-6 | Zinc | 11 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 89 mL | 12/31/2025 |
| 16485 | CLPMS-ICS-A | CLP-ICP-MS-ICS-Part A (0803) | IP-PS-12-036 | 10 mL | 08/12/2020 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ICP-MS ICSAB

**ICP-MS ICSAB** — **Description - ICP-MS ICSAB ISM01.3**

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 28404 | **Created By:** | J. Kershisnik | **Amount:** | 100 mL |
| **MFG:** | JTK | **Create Date:** | 06/16/2015 | **Expires:** | 06/30/2015 |
| **MFG Lot:** | JTK | **Lab Lot:** | 06/16/15 JTK | **Usable:** | Yes |
| **Part ID:** | | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 100000 ug/L |
| 2 | 7440-36-0 | Antimony | 22 ug/L |
| 3 | 7440-38-2 | Arsenic | 19 ug/L |
| 4 | 7440-39-3 | Barium | 21.7 ug/L |
| 5 | 7440-43-9 | Cadmium | 20 ug/L |
| 6 | 7440-70-2 | Calcium | 100000 ug/L |
| 7 | 7440-44-0 | Carbon | 200000 ug/L |
| 8 | 16887-00-6 | Chloride | 1000000 ug/L |
| 9 | 7440-47-3 | Chromium | 40 ug/L |
| 10 | 7440-48-4 | Cobalt | 20 ug/L |
| 11 | 7440-50-8 | Copper | 25 ug/L |
| 12 | 7439-89-6 | Iron | 100000 ug/L |
| 13 | 7439-92-1 | Lead | 25 ug/L |
| 14 | 7439-95-4 | Magnesium | 100000 ug/L |
| 15 | 7439-96-5 | Manganese | 27 ug/L |
| 16 | 7439-98-7 | Molybdenum | 2000 ug/L |
| 17 | 7440-02-0 | Nickel | 24 ug/L |
| 18 | 7723-14-0 | Phosphorus | 100000 ug/L |
| 19 | 7440-09-7 | Potassium | 100000 ug/L |
| 20 | 7782-49-2 | Selenium | 19 ug/L |
| 21 | 7440-23-5 | Sodium | 100000 ug/L |
| 22 | 63705-05-5 | Sulfur | 100000 ug/L |
| 23 | 7440-32-6 | Titanium | 2000 ug/L |
| 24 | 7440-62-2 | Vanadium | 19 ug/L |
| 25 | 7440-66-6 | Zinc | 29 ug/L |
| 26 | 7440-41-7 | Beryllium | 19 ug/L |
| 27 | 7440-22-4 | Silver | 18 ug/L |
| 28 | 7440-28-0 | Thallium | 21 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 79 mL | 12/31/2025 |
| 16485 | CLPMS-ICS-A | CLP-ICP-MS-ICS-Part A (0803) | IP-PS-12-036 | 10 mL | 08/12/2020 |
| 16486 | CLPMS-ICS-B | CLP-ICP-MS-ICS-Part B (0803) | IP-PS-12-037 | 10 mL | 08/12/2020 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 1 mL | 01/14/2017 |

# STANDARD REPORT

## Working Standard - ISM MS CCV

**ISM MS CCV** — **Description - ICP-MS ISM01.3 CCV**

**Standard:** 28405 **Created By:** J. Kershisnik **Amount:** 100 mL
**MFG:** JTK **Create Date:** 06/16/2015 **Expires:** 06/30/2015
**MFG Lot:** **Lab Lot:** 06/16/15 JTK **Usable:** Yes
**Part ID:** ICP-MS ISM CCV

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-70-2 | Calcium | 50000 ug/L |
| 2 | 7440-09-7 | Potassium | 50000 ug/L |
| 3 | 7439-95-4 | Magnesium | 50000 ug/L |
| 4 | 7440-23-5 | Sodium | 50000 ug/L |
| 5 | 7440-22-4 | Silver | 250 ug/L |
| 6 | 7429-90-5 | Aluminum | 50000 ug/L |
| 7 | 7439-89-6 | Iron | 50000 ug/L |
| 8 | 7782-49-2 | Selenium | 250 ug/L |
| 9 | 7440-36-0 | Antimony | 2500 ug/L |
| 10 | 7440-38-2 | Arsenic | 2500 ug/L |
| 11 | 7440-39-3 | Barium | 2500 ug/L |
| 12 | 7440-41-7 | Beryllium | 2500 ug/L |
| 13 | 7440-43-9 | Cadmium | 2500 ug/L |
| 14 | 7440-47-3 | Chromium | 2500 ug/L |
| 15 | 7440-48-4 | Cobalt | 2500 ug/L |
| 16 | 7440-50-8 | Copper | 2500 ug/L |
| 17 | 7439-92-1 | Lead | 2500 ug/L |
| 18 | 7439-96-5 | Manganese | 2500 ug/L |
| 19 | 7440-02-0 | Nickel | 2500 ug/L |
| 20 | 7440-28-0 | Thallium | 2500 ug/L |
| 21 | 7440-62-2 | Vanadium | 2500 ug/L |
| 22 | 7440-66-6 | Zinc | 2500 ug/L |

### Composition

| Standard | Standard ID | Description | Lab Lot ID | Volume | Expires |
|---|---|---|---|---|---|
| 4304 | ASTMType2Wat | ASTM Type 2 Deionized Water | ASTMType2Water | 85.525 mL | 12/31/2025 |
| 25304 | IV-STOCK-2 | ISM01.3 Standard | ICP-CLP | 0.475 mL | 10/01/2015 |
| 25320 | Ag Stock | 1,000 ug/mL Ag Stock | Ag 1,000 ug/mL | 0.025 mL | 08/30/2015 |
| 26849 | Al stock | 10,000 ug/mL Al Stock | SPEX Al 10,000 ug/mL | 0.475 mL | 01/30/2016 |
| 26850 | Fe Stock | 10,000 ug/mL Fe Stock | SPEX Fe 10,000 ug/mL | 0.475 mL | 01/30/2016 |
| 27253 | Se Stock Low | 1,000 ug/mL Se Stock | SPEX Se 1,000 ug/mL | 0.025 mL | 02/28/2016 |
| 27946 | DATACHEM-1 | ICPMS 20 ppm (No Ag or Se) | IP-PS-15-013 | 12.5 mL | 06/01/2016 |
| 28295 | Ultra-HNO3 | Ultra Nitric Acid | 06/10/15 kb | 0.5 mL | 01/14/2017 |

STANDARD REPORT

## Stock Standard - 6020ISS

| 6020ISS | Description - ICPMS EPA 6020 ISS |
|---|---|

**Standard:** 24864 **Created By:** K. Bitner **Amount:** 125 mL
**MFG:** Inorganic Ventures **Create Date:** 8/12/2014 **Expires:** 9/1/2015
**MFG Lot:** G2-MEB464028 **Lab Lot:** IP-PS-14-022 **Usable:** Yes
**Part ID:** 6020ISS

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-69-9 | Bismuth | 10 ug/mL |
| 2 | 7440-60-0 | Holmium | 10 ug/mL |
| 3 | 7440-74-6 | Indium | 10 ug/mL |
| 4 | 7439-93-2(6) | Lithium-6 | 10 ug/mL |
| 5 | 7440-16-6 | Rhodium | 10 ug/mL |
| 6 | 7440-20-2 | Scandium | 10 ug/mL |
| 7 | 7440-27-9 | Terbium | 10 ug/mL |
| 8 | 7440-65-5 | Yttrium | 10 ug/mL |

# STANDARD REPORT

## Stock Standard - IMS MES2

| IMS MES2 | Description - Multi-element Solution #2 |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 25397 | **Created By:** | K. Bitner | **Amount:** | 125 mL |
| **MFG:** | SPEX | **Create Date:** | 9/30/2014 | **Expires:** | 9/30/2015 |
| **MFG Lot:** | CL11-01YPY | **Lab Lot:** | IP-PS-14-027 | **Usable:** | Yes |
| **Part ID:** | CLMS-2 | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 10 mg/L |
| 2 | 7440-38-2 | Arsenic | 10 mg/L |
| 3 | 7440-39-3 | Barium | 10 mg/L |
| 4 | 7440-41-7 | Beryllium | 10 mg/L |
| 5 | 7440-69-9 | Bismuth | 10 mg/L |
| 6 | 7440-43-9 | Cadmium | 10 mg/L |
| 7 | 7440-70-2 | Calcium | 10 mg/L |
| 8 | 7440-46-2 | Cesium | 10 mg/L |
| 9 | 7440-47-3 | Chromium | 10 mg/L |
| 10 | 7440-48-4 | Cobalt | 10 mg/L |
| 11 | 7440-50-8 | Copper | 10 mg/L |
| 12 | 7440-55-3 | Gallium | 10 mg/L |
| 13 | 7440-74-6 | Indium | 10 mg/L |
| 14 | 7439-89-6 | Iron | 10 mg/L |
| 15 | 7439-92-1 | Lead | 10 mg/L |
| 16 | 7439-93-2 | Lithium | 10 mg/L |
| 17 | 7439-95-4 | Magnesium | 10 mg/L |
| 18 | 7439-96-5 | Manganese | 10 mg/L |
| 19 | 7440-02-0 | Nickel | 10 mg/L |
| 20 | 7440-09-7 | Potassium | 10 mg/L |
| 21 | 7440-17-7 | Rubidium | 10 mg/L |
| 22 | 7782-49-2 | Selenium | 10 mg/L |
| 23 | 7440-22-4 | Silver | 10 mg/L |
| 24 | 7440-23-5 | Sodium | 10 mg/L |
| 25 | 7440-24-6 | Strontium | 10 mg/L |
| 26 | 7440-28-0 | Thallium | 10 mg/L |
| 27 | 7440-61-1 | Uranium | 10 mg/L |
| 28 | 7440-62-2 | Vanadium | 10 mg/L |
| 29 | 7440-66-6 | Zinc | 10 mg/L |

STANDARD REPORT

## Stock Standard - Var-Tune Std

| *Var-Tune Std* | | Description - Var Tune Std/CLP, 200.8 Tune |
|---|---|---|
| **Standard:** 25851 | **Created By:** K. Bitner | **Amount:** 125 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 10/29/2014 | **Expires:** 11/1/2015 |
| **MFG Lot:** G2-MEB478062 | **Lab Lot:** IP-PS-14-043 | **Usable:** Yes |
| **Part ID:** VAR-TS-MS | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-39-3 | Barium | 10 mg/L |
| 2 | 7440-41-7 | Beryllium | 10 mg/L |
| 3 | 7440-45-1 | Cerium | 10 mg/L |
| 4 | 7440-48-4 | Cobalt | 10 mg/L |
| 5 | 7440-74-6 | Indium | 10 mg/L |
| 6 | 7439-92-1 | Lead | 10 mg/L |
| 7 | 7439-95-4 | Magnesium | 10 mg/L |
| 8 | 7440-28-0 | Thallium | 10 mg/L |
| 9 | 7440-29-1 | Thorium | 10 mg/L |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPMS-ICS-A

| CLPMS-ICS-A | | Description - CLP-ICP-MS-ICS-Part A (0803) |
|---|---|---|
| **Standard:** 16485 | **Created By:** J. Kershisnik | **Amount:** 600 mL |
| **MFG:** QATS Laboratory | **Create Date:** 9/26/2012 | **Expires:** 8/12/2020 |
| **MFG Lot:** ICSA-0803 | **Lab Lot:** IP-PS-12-036 | **Usable:** Yes |
| **Part ID:** | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 1000000 ug/L |
| 2 | 7440-36-0 | Antimony | 15 ug/L |
| 3 | 7440-38-2 | Arsenic | 1 ug/L |
| 4 | 7440-39-3 | Barium | 12 ug/L |
| 5 | 7440-43-9 | Cadmium | 7 ug/L |
| 6 | 7440-70-2 | Calcium | 1000000 ug/L |
| 7 | 7440-44-0 | Carbon | 2000000 ug/L |
| 8 | 16887-00-6 | Chloride | 10000000 ug/L |
| 9 | 7440-47-3 | Chromium | 210 ug/L |
| 10 | 7440-48-4 | Cobalt | 10 ug/L |
| 11 | 7440-50-8 | Copper | 80 ug/L |
| 12 | 7439-89-6 | Iron | 1000000 ug/L |
| 13 | 7439-92-1 | Lead | 40 ug/L |
| 14 | 7439-95-4 | Magnesium | 1000000 ug/L |
| 15 | 7439-96-5 | Manganese | 70 ug/L |
| 16 | 7439-98-7 | Molybdenum | 20000 ug/L |
| 17 | 7440-02-0 | Nickel | 60 ug/L |
| 18 | 7723-14-0 | Phosphorus | 1000000 ug/L |
| 19 | 7440-09-7 | Potassium | 1000000 ug/L |
| 20 | 7782-49-2 | Selenium | 3 ug/L |
| 21 | 7440-23-5 | Sodium | 1000000 ug/L |
| 22 | 63705-05-5 | Sulfur | 1000000 ug/L |
| 23 | 7440-32-6 | Titanium | 20000 ug/L |
| 24 | 7440-62-2 | Vanadium | 5 ug/L |
| 25 | 7440-66-6 | Zinc | 110 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPMS-ICS-B

| CLPMS-ICS-B | Description - CLP-ICP-MS-ICS-Part B (0803) |
|---|---|

**Standard:** 16486 **Created By:** J. Kershisnik **Amount:** 300 mL
**MFG:** QATS Laboratory **Create Date:** 9/26/2012 **Expires:** 8/12/2020
**MFG Lot:** ICSB-0803 **Lab Lot:** IP-PS-12-037 **Usable:** Yes
**Part ID:**

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 0 ug/L |
| 2 | 7440-36-0 | Antimony | 205 ug/L |
| 3 | 7440-38-2 | Arsenic | 189 ug/L |
| 4 | 7440-39-3 | Barium | 205 ug/L |
| 5 | 7440-41-7 | Beryllium | 190 ug/L |
| 6 | 7440-43-9 | Cadmium | 193 ug/L |
| 7 | 7440-70-2 | Calcium | 0 ug/L |
| 8 | 7440-44-0 | Carbon | 0 ug/L |
| 9 | 16887-00-6 | Chloride | 0 ug/L |
| 10 | 7440-47-3 | Chromium | 190 ug/L |
| 11 | 7440-48-4 | Cobalt | 190 ug/L |
| 12 | 7440-50-8 | Copper | 170 ug/L |
| 13 | 7439-89-6 | Iron | 0 ug/L |
| 14 | 7439-92-1 | Lead | 210 ug/L |
| 15 | 7439-95-4 | Magnesium | 0 ug/L |
| 16 | 7439-96-5 | Manganese | 200 ug/L |
| 17 | 7439-98-7 | Molybdenum | 0 ug/L |
| 18 | 7440-02-0 | Nickel | 180 ug/L |
| 19 | 7723-14-0 | Phosphorus | 0 ug/L |
| 20 | 7440-09-7 | Potassium | 0 ug/L |
| 21 | 7782-49-2 | Selenium | 187 ug/L |
| 22 | 7440-22-4 | Silver | 180 ug/L |
| 23 | 7440-23-5 | Sodium | 0 ug/L |
| 24 | 63705-05-5 | Sulfur | 0 ug/L |
| 25 | 7440-28-0 | Thallium | 210 ug/L |
| 26 | 7440-32-6 | Titanium | 0 ug/L |
| 27 | 7440-62-2 | Vanadium | 185 ug/L |
| 28 | 7440-66-6 | Zinc | 180 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - IV-STOCK-2

| IV-STOCK-2 | | Description - ISM01.3 Standard |
|---|---|---|
| **Standard:** 25304 | **Created By:** J. Sanchez | **Amount:** 500 mL |
| **MFG:** Inorganic Ventures | **Create Date:** 9/22/2014 | **Expires:** 10/1/2015 |
| **MFG Lot:** G2-MEB506019 | **Lab Lot:** ICP-CLP | **Usable:** Yes |
| **Part ID:** P1081H | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-70-2 | Calcium | 10000 ug/mL |
| 2 | 7440-09-7 | Potassium | 10000 ug/mL |
| 3 | 7439-95-4 | Magnesium | 10000 ug/mL |
| 4 | 7440-23-5 | Sodium | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - Ag Stock

| Ag Stock | Description - 1,000 ug/mL Ag Stock |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Standard:** | 25320 | **Created By:** | P. Foote | **Amount:** | 125 mL |
| **MFG:** | Spex CertiPrep | **Create Date:** | 9/2/2014 | **Expires:** | 8/30/2015 |
| **MFG Lot:** | 19-13AGY | **Lab Lot:** | Ag 1,000 ug/mL | **Usable:** | Yes |
| **Part ID:** | PLAG2-2Y | | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7440-22-4 | Silver | 1000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - CLPICP-ICV1

| CLPICP-ICV1 | Description - CLP-ICP/ICPMS-ICV-1 |
|---|---|

**Standard:** 25667 **Created By:** J. Kershisnik **Amount:** 500 mL
**MFG:** QATS Laboratory **Create Date:** 10/16/2014 **Expires:** 8/12/2020
**MFG Lot:** ICV1-0307 **Lab Lot:** IP-PS-14-039 **Usable:** Yes
**Part ID:**

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 25210 ug/L |
| 2 | 7440-36-0 | Antimony | 9940 ug/L |
| 3 | 7440-38-2 | Arsenic | 9990 ug/L |
| 4 | 7440-39-3 | Barium | 4970 ug/L |
| 5 | 7440-41-7 | Beryllium | 4950 ug/L |
| 6 | 7440-43-9 | Cadmium | 4960 ug/L |
| 7 | 7440-70-2 | Calcium | 100260 ug/L |
| 8 | 7440-47-3 | Chromium | 4900 ug/L |
| 9 | 7440-48-4 | Cobalt | 4990 ug/L |
| 10 | 7440-50-8 | Copper | 4920 ug/L |
| 11 | 7439-89-6 | Iron | 50820 ug/L |
| 12 | 7439-92-1 | Lead | 10020 ug/L |
| 13 | 7439-95-4 | Magnesium | 60740 ug/L |
| 14 | 7439-96-5 | Manganese | 4990 ug/L |
| 15 | 7440-02-0 | Nickel | 5030 ug/L |
| 16 | 7440-09-7 | Potassium | 100210 ug/L |
| 17 | 7782-49-2 | Selenium | 10290 ug/L |
| 18 | 7440-22-4 | Silver | 5010 ug/L |
| 19 | 7440-23-5 | Sodium | 100970 ug/L |
| 20 | 7440-28-0 | Thallium | 10280 ug/L |
| 21 | 7440-62-2 | Vanadium | 5010 ug/L |
| 22 | 7440-66-6 | Zinc | 10250 ug/L |

# STANDARD REPORT

## Constituent

## Stock Standard - 6020Cal1

| 6020Cal1 | Description - ICPMS EPA 6020 Cal#1 |
|---|---|

**Standard:** 26205 **Created By:** K. Bitner **Amount:** 125 mL
**MFG:** Inorganic Ventures **Create Date:** 12/2/2014 **Expires:** 12/1/2015
**MFG Lot:** F2-MEB419032 **Lab Lot:** IP-PS-14-051 **Usable:** Yes
**Part ID:** 6020CAL-1

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 20 mg/L |
| 2 | 7440-36-0 | Antimony | 20 mg/L |
| 3 | 7440-38-2 | Arsenic | 20 mg/L |
| 4 | 7440-39-3 | Barium | 20 mg/L |
| 5 | 7440-41-7 | Beryllium | 20 mg/L |
| 6 | 7440-43-9 | Cadmium | 20 mg/L |
| 7 | 7440-70-2 | Calcium | 20 mg/L |
| 8 | 7440-47-3 | Chromium | 20 mg/L |
| 9 | 7440-48-4 | Cobalt | 20 mg/L |
| 10 | 7440-50-8 | Copper | 20 mg/L |
| 11 | 7439-89-6 | Iron | 20 mg/L |
| 12 | 7439-92-1 | Lead | 20 mg/L |
| 13 | 7439-95-4 | Magnesium | 20 mg/L |
| 14 | 7439-96-5 | Manganese | 20 mg/L |
| 15 | 7440-02-0 | Nickel | 20 mg/L |
| 16 | 7440-09-7 | Potassium | 20 mg/L |
| 17 | 7782-49-2 | Selenium | 20 mg/L |
| 18 | 7440-22-4 | Silver | 20 mg/L |
| 19 | 7440-23-5 | Sodium | 20 mg/L |
| 20 | 7440-28-0 | Thallium | 20 mg/L |
| 21 | 7440-62-2 | Vanadium | 20 mg/L |
| 22 | 7440-66-6 | Zinc | 20 mg/L |

# STANDARD REPORT

## Constituent

## Stock Standard - Al stock

| *Al stock* | | | Description - 10,000 ug/mL Al Stock |
|---|---|---|---|
| **Standard:** 26849 | **Created By:** P. Foote | | **Amount:** 125 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 1/26/2015 | | **Expires:** 1/30/2016 |
| **MFG Lot:** AG15-142ALY | **Lab Lot:** SPEX Al 10,000 ug/mL | | **Usable:** Yes |
| **Part ID:** PLAL2-3Y | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - Fe Stock

| *Fe Stock* | | | Description - 10,000 ug/mL Fe Stock |
|---|---|---|---|
| **Standard:** 26850 | **Created By:** P. Foote | | **Amount:** 125 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 1/26/2015 | | **Expires:** 1/30/2016 |
| **MFG Lot:** AL15-138FEY | **Lab Lot:** SPEX Fe 10,000 ug/mL | | **Usable:** Yes |
| **Part ID:** PLFE2-3Y | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7439-89-6 | Iron | 10000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - Se Stock Low

| Se Stock Low | | | Description - 1,000 ug/mL Se Stock |
|---|---|---|---|
| **Standard:** 27253 | **Created By:** P. Foote | | **Amount:** 30 mL |
| **MFG:** SPEX CertiPrep | **Create Date:** 2/26/2015 | | **Expires:** 2/28/2016 |
| **MFG Lot:** 20-79SEM | **Lab Lot:** SPEX Se 1,000 ug/mL | | **Usable:** Yes |
| **Part ID:** PLSE2-2M | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7782-49-2 | Selenium | 1000 ug/mL |

# STANDARD REPORT

## Constituent

## Stock Standard - DATACHEM-1

| DATACHEM-1 | Description - ICPMS 20 ppm (No Ag or Se) |
|---|---|

**Standard:** 27946 **Created By:** K. Bitner **Amount:** 250 mL
**MFG:** Inorganic Ventures **Create Date:** 5/4/2015 **Expires:** 6/1/2016
**MFG Lot:** G2-MEB452151 **Lab Lot:** IP-PS-15-013 **Usable:** Yes
**Part ID:** DATACHEM-1

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| 1 | 7429-90-5 | Aluminum | 20 ug/mL |
| 2 | 7440-36-0 | Antimony | 20 ug/mL |
| 3 | 7440-38-2 | Arsenic | 20 ug/mL |
| 4 | 7440-39-3 | Barium | 20 ug/mL |
| 5 | 7440-41-7 | Beryllium | 20 ug/mL |
| 6 | 7440-43-9 | Cadmium | 20 ug/mL |
| 7 | 7440-70-2 | Calcium | 20 ug/mL |
| 8 | 7440-47-3 | Chromium | 20 ug/mL |
| 9 | 7440-48-4 | Cobalt | 20 ug/mL |
| 10 | 7440-50-8 | Copper | 20 ug/mL |
| 11 | 7439-89-6 | Iron | 20 ug/mL |
| 12 | 7439-92-1 | Lead | 20 ug/mL |
| 13 | 7439-95-4 | Magnesium | 20 ug/mL |
| 14 | 7439-96-5 | Manganese | 20 ug/mL |
| 15 | 7440-02-0 | Nickel | 20 ug/mL |
| 16 | 7440-09-7 | Potassium | 20 ug/mL |
| 17 | 7440-23-5 | Sodium | 20 ug/mL |
| 18 | 7440-28-0 | Thallium | 20 ug/mL |
| 19 | 7440-62-2 | Vanadium | 20 ug/mL |
| 20 | 7440-66-6 | Zinc | 20 ug/mL |

## STANDARD REPORT

### Constituent

## Solvent Standard - ASTMType2Wat

| *ASTMType2Wat* | | | Description - ASTM Type 2 Deionized Water |
|---|---|---|---|
| **Standard:** 4304 | **Created By:** R. Lemon | | **Amount:** 1 L |
| **MFG:** | **Create Date:** 6/1/2009 | | **Expires:** 12/31/2025 |
| **MFG Lot:** | **Lab Lot:** ASTMType2Water | | **Usable:** Yes |
| **Part ID:** | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

## STANDARD REPORT

### Constituent

## Solvent Standard - Ultra-HNO3

| *Ultra-HNO3* | | | Description - Ultra Nitric Acid |
|---|---|---|---|
| **Standard:** 28295 | **Created By:** K. Bitner | | **Amount:** 2000 mL |
| **MFG:** BDH Aristar Ultra | **Create Date:** 6/10/2015 | | **Expires:** 1/14/2017 |
| **MFG Lot:** 1213120 | **Lab Lot:** 06/10/15 kb | | **Usable:** Yes |
| **Part ID:** 87003-658 | | | |

| Pos. | Analyte | Name | Concentration |
|---|---|---|---|
| Solvent - Analyte(s) not applicable | | | |

# ISM01.3-7471B Mercury in Soil Analysis Electronic Log

## Electronic Log Information

File Location: ALSltws013\AA_current\Mercury\Hg-EPA-CLP-DATA File Name: AN-HGS-MF9M21-150398

## Sample & Case Information

| ALS workorder ID | EPA Sample Names | Case | SDG | Account | No. of Samples |
|---|---|---|---|---|---|
| 1515559 | MF9M21-35, 37-41 | 45299 | MF9M21 | 8201 | 20 |

## Sample Preparation Information

1) Preparation Group ID: EHG/5875 (HBN:150235)
2) Preparation Log File Location:
   Alsltws013\DataReview; folder = 150398
3) Physical Description File Location:
   Alsltws013\AAcurrent\Mercury\Hg-EPA-CLP-DATA
4) Preparation Date/Time: 06/10/2015 10:25
5) Preparer: Christopher R. Hansen

## Analysis and Data Information

1) Analysis Group ID: EHG/5879 (HBN:150398)
2) Data Result File Name: CV2-15168
3) Analysis Date/Start-time: 06/11/2015 10:51
4) 12% $NH_2OH \bullet HCl$ Entry: AA_current/HgReagents/21
5) 10% SnCl2 Entry: AA_current/HgReagents/23
6) 5% HNO3 + 5% HCl Entry: AA_current/HgReagents/27
7) Analyst: Christopher R. Hansen

## Analysis Instrument

1) Instrument Type: Cold Vapor Atomic Absorption
2) Instrument Name: CETAC M-7500
3) Instrument ID: AACV02
4) Reading Wavelength: 253.65 nm
5) Running Condition of Instrument: Good

## Calibration Data and Calculations

1) Correlation Coefficient: 0.99783
2) equation $A = n_1 + n_2C$ $n_1$ 1301.729
3) then $C = ( A - n_1 ) / n_2$ $n_2$ 17284.31
4) Calculated mercury concentrations (µg/L)

| Stds. | µAbs | Result | Target | % Difference |
|---|---|---|---|---|
| S0 | -13.635 | -0.0761 | 0.0 | NA |
| S0.2 | 3899.4 | 0.1503 | 0.2 | 24.9% |
| S0.5 | 9430.4 | 0.4703 | 0.5 | 5.9% |
| S1.0 | 17975 | 0.9646 | 1.0 | 3.5% |
| S5.0 | 93820 | 5.3527 | 5.0 | -7.1% |
| S10 | 170750 | 9.8036 | 10.0 | 2.0% |

## Sample Preparation Comments

None were required.

## Sample Analysis Comments

None were required.

| Sample ID | Dilution | Reason | Pipettes used |
|---|---|---|---|

No sample dilutions were required.

## Method Information

1) Method/SOP: ISM01.3 7471B Mercury in Soil: SOP (IT-EP-ISM-HG)
2) Method Detection Limit (MDL) = 0.001457 mg/kg [Hg]; Effective 01/15/2015 - 01/15/2016
3) Contract Required Quantitation Limit (CRQL) = 0.1 mg/kg [Hg]
4) Method Control Limits: Calibration Stds ±30% difference; ICV/CCV ±15% of target; MS ±25% of target

Project No. NA

TITLE ALS Salt Lake - EPA CLP Mercury Run Log

Book No. 4723

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| Workorder (s) | SDG | Analysis HBN | Raw Data File Name | Analysis Date | Start Time | End Time | Matrix Type | No. of samples | Initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1508351 | MX1M86 | 146837 | CV2-15099 | 04/07/2015 | 10:55 | 11:34 | Water | 1 | CH | PE |
| 1508355 | MX1M90 | 146838 | CV2-15105 | 04/08/2015 | 11:50 | 12:07 | Soil | 1 | CH | PE |
| 1508355 | MX1M90 | 146839 | CV2-15099 | 04/07/2015 | 10:55 | 11:34 | TCLP | 1 | CH | PE |
| 1510008 | MH0AF8 | 147114 | CV2-15110 | 04/14/2015 | 16:15 | 16:42 | Water | 10 | CH | None |
| 1509906 | MX1P28 | 147244 | CV2-15115 | 04/15/2015 | 15:44 | 16:01 | Water | 1 | CH | ISM02.2 PE |
| 1509910 | MX1P32 | 147555 | CV2-15119 | 04/17/2015 | 13:40 | 13:57 | Soil | 1 | CH | ISM02.2 PE |
| 1509910 | MX1P32 | 147784 | CV2-15127 | 04/27/2015 | 1454 | 1519 | Soil | 1 | AT | ISM02.2 PE |
| 1510625 | MX1P80 | 148140 | CV2-15130 | 04/30/2015 | 17:06 | 17:23 | Soil | 1 | CH | ISM01.3 PE |
| 1510622 | MX1P76 | 148221 | CV2-15133 | 05/~~04~~/05/2015 CH 05/05/2015 | 10:15 | 10:32 | Water | 1 | CH | ISM01.3 PE |
| 1512055 | MX1R04 | 148226 | CV2-15134 | 05/05/2015 | 10:36 | 10:53 | Water | 1 | CH | ISM02.2 PE |
| 1512056 | MX1R08 | 148491 | CV2-15138 | 05/07/2015 | 15:09 | 15:38 | Soil | 1 | CH | ISM02.2 PE Reanalyzed once for MS |
| 1513418 | MX1S53 | 149204 | CV2-15151 | 05/20/2015 | 15:25 | 16:07 | Soil | 1 | CH | ISM02.2 PE Dilution Required |
| 1513993 | 51915 | 149546 | CV2-15156a | 05/27/2015 | 12:38 | 12:55 | Water | 1 | CH | NA |
| 1513412 | MX1S49 | 149554 | CV2-15155 | 05/27/2015 | 11:33 | 12:17 | Water | 1 | CH | ~~NA~~ ISM02.2 PE CH 06/01/2015 |
| 1513445 | MX1S57 | 149548 | CV2-15155 | 05/27/2015 | 11:33 | 12:17 | TCLP | 1 | CH | ISM02.2 PE / 48X dilution |
| 1514325 | MF9L76 | 149911 | CV2-15161 | 06/04/2015 | 11:18 | 11:47 | Soil | 12 | CH | None |
| 1515757 | MH2TR0 | 150219 | CV2-15166 | 06/09/2015 | 10:50 | 11:07 | Soil | 1 | CH | None |
| 1515388 | MF9L98 | 150397 | CV2-15167 | 06/11/2015 | 10:08 | 10:48 | Soil | 20 | CH | None |
| 1515559 | MF9M21 | 150398 | CV2-15168 | 06/11/2015 | 10:51 | 11:32 | Soil | 20 | CH | None |
| 1515392, 1515633 | MF9M15 | 150465 | CV2-15170a | 06/12/2015 | 12:57 | 13:27 | Soil | 13 | CH | None |

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Witnessed & Understood by me, | Date | Invented by: | Date

Recorded by:

ALS Reagent Report

ID Number: 21 Description: 12% Hydroxylamine Hydrochloride

Analyst: Christopher Hansen

Date Created: 03/27/2015 Expiration Date: 03/27/2016

Pipettes Used:

Balanced Used: 102887

Materials Used, Manufacturer, Lots, Amounts, Final Concentrations if applicable

240g hydroxylamine hydrochloride was dissolved into 2L ASTM type II water. Total of 8L (4 x 2L) was prepared.
Hydroxylamine Hydrochloride, Crystal: J.T. Baker batch #0000079919.

ALS Reagent Report

ID Number: 23 Description: 10% Stannous Chloride in 7% Hydrochloric Acid

Analyst: Shane Stewart

Date Created: 04/14/2015 Expiration Date: 04/14/2016

Pipettes Used: Acid Dispenser

Balanced Used: 102887

Materials Used, Manufacturer, Lots, Amounts, Final Concentrations if applicable

Tin(II) chloride dihydrate, reagent grade - Alfa Aesar - Lot:T22A037.
Hydrochloric acid - EMD OmniTrace - Lot:54234.
200g tin chloride dissolved in 140mL HCl and diluted to 2L with ASTM Type II water.

ALS Reagent Report

ID Number: 27 Description: M-7500 CVAA Rinse Solution

Analyst: Christopher Hansen

Date Created: 05/14/2015 Expiration Date: 05/14/2016

Pipettes Used: Acid Dispenser

Balanced Used:

Materials Used, Manufacturer, Lots, Amounts, Final Concentrations if applicable

100mL of concentrated nitric acid and 100mL of concentrated hydrochloric acid was diluted to 2L with ASTM type II water. 12L (6 x 2L-bottles) was prepared. Nitric Acid - J.T. Baker Lot 104117. Hydrochloric Acid - EMD Lot 54310.



00425